

17 ALTERNATIVES TO THE PROPOSED PROJECT

17.1 INTRODUCTION

State CEQA Guidelines §15126.6(a) requires an evaluation of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” The objectives of the proposed mine expansion project are identified in Section 2.4 in Chapter 2, Project Description, of this EIR. Alternatives are used to determine whether or not a variation of the proposed project would reduce or eliminate significant project impacts within the basic framework of the objectives. State CEQA Guidelines §15126.6(c) discusses the range of alternatives to be evaluated, requiring that “[t]he EIR should briefly describe the rationale for selecting the alternatives to be discussed. ...Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are: (I) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts.” The evaluation of alternatives is governed by the “rule of reason,” requiring evaluation of only those alternatives “necessary to permit a reasoned choice” (State CEQA Guidelines §15126.6[e][3][f]).

State CEQA Guidelines §15126.6(e) requires that, among other alternatives, a “no project” alternative be evaluated in comparison to the proposed project. State CEQA Guidelines §15126.6(e)(2) requires that the “no project” analysis “discuss the existing conditions ... as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.”

This chapter provides an analysis of a No Project Alternative that would include the completion of mining and final site reclamation in accordance with the current mine reclamation plan (Western Planning and Engineering 1986). Two other mine expansion alternatives evaluated in this chapter include the No Asphalt Batch Plant Alternative and the Reduced Acreage Alternative. Potential environmental impacts of these alternatives are discussed as comparisons to the proposed mine expansion project. Significant environmental impacts resulting from alternatives evaluated in this chapter but not from the proposed mine expansion project are also identified.

Continued use of the existing haul route by trucks serving the proposed mine expansion project is evaluated as part of the proposed project (see Chapter 2). Before this EIR was prepared, Placer County staff required the applicant to identify and assess several other potential haul routes. On behalf of the applicant, kdAnderson Transport Engineers prepared a report entitled *Access Alternatives Analysis for Patterson Sand & Gravel, Placer County* (kdAnderson 2000). The alternate haul route alignments that were not selected are discussed in Section 17.2 below.

One alternative identified in the kdAnderson report remains under consideration by Placer County, and encompasses two optional alignments. This alternative is evaluated in Section 17.3, Haul Route Alternative, at a level of detail sufficient for the Placer County Board of Supervisors to approve the route, if desired.

17.2 ALTERNATIVES PREVIOUSLY CONSIDERED AND REJECTED

ALTERNATE ACCESS ROUTE SOUTH OF SHERIDAN

An alternate Sheridan bypass route to SR 65 via Nader Road, south of the proposed mine expansion site, was considered. The route would have involved constructing a portion of new road from Riosa Road to the north leg of Nader Road, using and improving an existing portion of Ranch House Road. Under this alternative, Placer County would have had to construct and improve several sections of roadway, including areas where existing rights-of-way would have been insufficient to accommodate the road width or may have brought the roadway very close to existing structures. In this circumstance, Placer County would have needed to acquire property, in-kind rights-of-way, or easements. Based on the substantial cost of purchasing offsite properties and/or necessary rights-of-way and potential issues involving adequate distance between the road and existing structures, this alternative was rejected.

ALTERNATE ACCESS ROUTES ON THE SOUTH SIDE OF THE BEAR RIVER

Two alternatives were considered that would have routed truck traffic north of Sheridan from Camp Far West Road to SR 65 along the south side of the Bear River via new or existing roads. The new roads would have required an intersection with Camp Far West Road. Some of the existing dirt roads are located north of the Bear River levee, and there is a private road on top of the levee. Existing agricultural interests have private access to both sides of SR 65 approximately 400 feet south of the Bear River Bridge.

One of the two proposed routes would have accessed SR 65 on the east by passing under the Union Pacific Railroad (UPRR) tracks and would have required the addition of a deceleration lane on northbound SR 65. The other route would have reached SR 65 by passing under the UPRR tracks and the highway to join Wheatland Road and Placer Road, entering SR 65 on the west. This route would have required placement of fill within the floodplain for roadway improvements. Road construction within the floodplain could potentially have affected riparian biological resources supported by the Bear River. A new intersection at Camp Far West Road might also have interfered with existing irrigation canal diversion controls, and would likely have created a sight distance problem at the new intersection. Approval for either of these routes would have needed to be acquired from Caltrans, the Placer County Flood Control and Water Conservation District, and perhaps UPRR. These alternatives would have required acquisition of property or in-kind rights-of-way or easements, including the paved areas around the underpass at the existing railroad tracks, to provide access to SR 65. Based on the substantial cost of purchasing offsite properties and/or necessary rights-of-way, the need for improvements to the railroad underpass, the need for Caltrans and flood control district approval, potential floodplain and biological impacts, potential sight distance problems at Camp Far West Road, and potential interference with irrigation canal diversion controls, both of these alternatives were rejected.

ALTERNATE ACCESS ROUTE NORTH OF THE BEAR RIVER

An alternate access route to SR 65 north of the Bear River through Yuba County was also considered. This route would have involved use of onsite haul roads and construction of a road along the north side of the Bear River that would have required a new railroad crossing and new access to SR 65. This alternative would have required substantial improvements to internal haul roads to allow year-round access for haul trucks on the Patterson mine site. This alternative would also have required acquisition of property or in-kind right-of-way or easement, including access across or under the existing railroad tracks, to allow truck traffic access to SR 65. Conflicts between the grade of the highway and the grade of the railroad tracks could also have complicated siting of the structures in compliance with Caltrans requirements. Constructing a new road along the Bear River could also have affected the floodplain and riparian biological resources along the river. Based on the substantial cost of purchasing offsite properties and/or necessary rights-of-way, and the need for internal roadway improvements that could have hindered the full development of mineral resources on the Patterson mine site, this alternative was rejected.

ALTERNATE ACCESS ROUTE AT WHEATLAND

This alternative would have routed truck traffic from the project site north across the Bear River to Spenceville Road and from there to Wheatland. This alternative would have required substantial improvements to internal haul roads to allow year-round access for haul trucks on the Patterson mine site. This alternative also would have required acquisition of private property or in-kind rights-of-way or easements to construct a road from the mine to Spenceville Road to provide truck traffic with access to SR 65. In addition, this alternative would have routed trucks through the city of Wheatland, rather than providing a bypass. Based on the substantial cost of purchasing offsite properties and/or necessary rights-of-way, the need for internal roadway improvements that could have hindered the full development of mineral resources on the Patterson mine site, and potential traffic and noise issues related to increasing truck traffic in Wheatland, this alternative was rejected.

17.3 ALTERNATIVES CONSIDERED

NO PROJECT ALTERNATIVE

DESCRIPTION

The No Project Alternative would involve the completion of mining within currently permitted areas north and south of the Bear River over approximately 25 years and final site reclamation of the approximately 326-acre Patterson mine site in accordance with the existing CUP and the currently approved mine reclamation plan (Western Planning and Engineering 1986). Mining and processing rates would be similar to existing rates (an AAPR of 1.5 mty and a MAPR of 1.82 mty [see Chapter 2]). Mined materials would continue to be processed in the processing area south of the Bear River using existing processing methods and facilities, including the crusher plant, wash plant #1, the sand classifier, and wash plant #2. No asphalt batch plant would be constructed, and no asphaltic concrete would be produced. A description of the mining and processing methods at the existing operation is provided

in Chapter 2, Project Description. After the completion of mining operations, the site would be reclaimed to include a 200-acre private lake north of the Bear River, a 40-acre pay fishing lake south of the Bear River (in the vicinity of the proposed mining area in the eastern portion of Phase 1 and incorporating the existing reclaimed pond), a campground in the location of the processing area, and riparian revegetation along the Bear River.

ENVIRONMENTAL ANALYSIS

Land Use/Agriculture

The No Project Alternative would not result in impacts on land use and agriculture beyond those already permitted for the existing operation. No change would be proposed to the currently permitted use for mining and processing operations associated with the existing operation. The currently permitted project would convert approximately 1 acre of Farmland of Statewide Importance, as shown in Exhibit 4-3. The approved mine reclamation plan does not include agricultural reclamation, so approximately 1 acre of farmland would be permanently converted to nonagricultural uses. The proposed project would result in phased conversion of approximately 254 acres of state-designated and federally designated Farmland, and would reclaim 254 acres of land to agricultural land that might not demonstrate the characteristics required for state or federal designation. The No Project Alternative, therefore, would result in the permanent loss of approximately 1 acre of agricultural land, but would not result in permanent conversion of designated Farmland to nondesignated agricultural land.

This alternative would not include backfilling or reclamation in the eastern portion of Phase 1, expansion of activities in the Phase 6 mining/reclamation area, or the proposed asphalt batch plant. Therefore, when compared with the proposed project, this alternative would result in fewer land use compatibility conflicts associated with air quality, health risks related to diesel exhaust, deposition of particulates (i.e., dust) on nearby crops, detectable odors, and onsite noise levels.

Visual Resources

Implementation of the No Project Alternative would not result in any additional impacts on visual resources beyond those already allowed under the existing permit. The asphalt batch plant would not be constructed and therefore would not be visible. Because no mining would occur adjacent to Camp Far West Road in the vicinity of proposed mining Phase 6, this alternative would reduce significant visual impacts related to Phase 6. Long-term views of the Patterson mine site would be enhanced by site reclamation activities that would include demolition of all mine-related structures and facilities, the creation of two lakes, revegetation of riparian habitat, and construction of a campground in the current processing area.

Because no mining would occur adjacent to Camp Far West Road in the vicinity of proposed mining Phase 6, less-than-significant nighttime lighting impacts associated with this alternative would be reduced compared to those for the proposed mine expansion project.

Public Services

Because the No Project Alternative would not result in any land use or operational changes beyond those already permitted for the existing operation, it would neither adversely affect nor increase the demand for fire protection services, emergency response services, police services, schools, water, wastewater, or solid waste disposal. This alternative would result in similar but slightly decreased less-than-significant impacts on public services.

Traffic

Implementation of the No Project Alternative would result in no additional impacts on traffic beyond those already permitted for the existing operation. Mine-related traffic on local roadways, including Camp Far West Road, Porter Road, Karchner Road, and Riosa Road, would continue at current levels under this alternative because the mining operation would continue for approximately 25 years and the site would be reclaimed in accordance with SMARA. Annual truck trips under this alternative would remain at the current level with production of 1.5 mty (AAPR) rather than being reduced to 1.25 mty (AAPR) under the proposed mine expansion project as a result of production cuts. Truck trips under this alternative would continue to affect LOS in Sheridan at existing levels. Therefore, implementation of this alternative would result in increased traffic impacts compared to impacts of the proposed mine expansion project with regard to LOS.

Air Quality

Implementation of the No Project Alternative would result in no additional impacts on air quality beyond those already permitted for the existing operation. Under this alternative, mining and processing of sand and gravel reserves at the Patterson mine site would be completed in accordance with the existing schedule, and the site would be fully reclaimed in accordance with SMARA. Consequently, the presence of existing mine-related equipment and operations that could result in air quality impacts would not be extended by the proposed 30 years. Because this alternative would not include mining and reclamation in Phase 6, it would result in a decrease of localized pollutant concentrations at nearby sensitive receptors. Given the distance between the nearby sensitive receptors and this mining phase, pollutant concentrations of fugitive dust and mobile-source equipment emissions (i.e., NO_x and diesel exhaust) would be substantially reduced. Construction and operational emissions and odors would be further reduced because the proposed asphalt batch plant would not be constructed. Under this alternative, average annual project-generated highway truck traffic would remain at current volumes, which would be higher than under the proposed project and would result in higher offsite mobile-source emissions than the proposed project. Overall, however, implementation of this alternative would result in reduced impacts on air quality compared to impacts of the proposed mine expansion project.

Noise

Implementation of the No Project Alternative would result in no additional noise impacts beyond those already permitted for the existing operation. Under this alternative, no noise-generating activities beyond those associated with the existing operation would occur. Mining and reclamation would not

occur in the area proposed for Phase 6, reducing noise impacts on nearby sensitive receptors. Under this alternative, average annual project-generated highway truck traffic would remain at current volumes, which would be higher than volumes under the proposed project. The higher truck volumes, however, would not result in noticeably higher traffic noise than truck volumes under the proposed project. Typically, vehicle traffic must double before there is a noticeable change in ambient noise levels (i.e., 3 dBA). Therefore, implementation of this alternative would result in reduced noise impacts compared to the significant but mitigable impacts of the proposed mine expansion project.

Geology, Minerals, Soils, and Paleontological Resources

Under this alternative, mining would not occur in the proposed expansion area, thereby reducing the area subject to significant but mitigable impacts related to erosion of reclaimed slopes, unstable fill materials, levee erosion and instability, potential cut slope instability and paleontological resources. All mine side slopes and other mine-related disturbance would be fully reclaimed in accordance with the current mine reclamation plan (Western Planning and Engineering 1986); mining and final site reclamation would be completed in approximately 2028. Therefore, potential impacts on geology, minerals, soils, and paleontological resources would be reduced compared to impacts of the proposed mine expansion project.

Water Resources

Because the No Project Alternative would not result in any land use or operational changes beyond those already permitted for the existing operation, this alternative would result in no additional impacts on water resources beyond those related to the existing mining operation. This alternative would also result in similar but reduced impacts related to water resources. Because this alternative would not include the proposed expansion mining pits, flooding of mining and reclamation features would be less likely than under the proposed project. This alternative would not increase the amount of impervious surfaces within the project site, nor would it increase the offsetting basin storage in the proposed project. Because this alternative would include less open-water acreage than the proposed project, it would not result in an increased water area within which methyl mercury could form. The No Project Alternative, however, could increase public contact with methyl mercury, because it would include a fee-based campground and fishing lake. This alternative therefore would result in similar but reduced impacts related to water resources.

Biological Resources

Mining and processing operations have resulted in surface disturbances of approximately 283 acres; the remaining 43 acres of the approximately 326-acre site would be disturbed through clearing and initial pit development during the remaining operational mine life. Wetland and riparian vegetation have become established along the margins of the reclaimed pond in the vicinity of the eastern portion of proposed mining Phase 1. After the completion of mining operations, the site would be reclaimed to include a 200-acre private lake north of the Bear River, a 40-acre fishing lake south of the Bear River in the vicinity of the eastern portion of Phase 1 and incorporating the existing reclaimed pond, a campground in the location of the processing area, and riparian revegetation along the Bear River.

Incorporation of the reclaimed pond into the fishing lake would adversely affect the fish, wildlife, and wetland and riparian vegetation currently supported by the pond.

The proposed mine expansion project would affect an additional 365 acres of the approximately 448-acre proposed expansion area with impacts on plant communities considered sensitive by CDFG, including valley oak and riparian woodland, but would also result in permanent preservation of 83 acres of oak woodland. The No Project Alternative would substantially reduce the potential for loss of foraging habitat for raptors and other special-status avian species, and for disturbance of active raptor nests within the proposed expansion area. Fewer new impacts on elderberry shrubs would occur than under the proposed mine expansion project.

Public Health and Safety

Hazards associated with the No Project Alternative would include the creation of reclamation features that could be an attractive nuisance to unauthorized persons and the creation of vector breeding habitat (particularly for mosquitoes) as a result of the creation of standing water within mine pit areas and reclaimed open-water lake areas. Potential less-than-significant public health and safety impacts associated with mining in the proposed expansion area and modifications to the current mine reclamation plan would not occur with implementation of this alternative. Therefore, this alternative would result in reduced less-than-significant impacts on public health and safety when compared with impacts of the proposed mine expansion project.

Hazardous Materials

Hazardous materials used in conjunction with the existing operation, including diesel and gasoline, and other petroleum products associated with the maintenance and operation of mine-related equipment, would continue to be used in mining and processing operations for the remainder of the operational life of the mine. This would include final reclamation operations, which would consist of demolishing mine-related facilities and using heavy equipment for recontouring, grading, and revegetation. However, the use of these materials and asphaltic oil that would be associated with the asphalt batch plant under the proposed mine expansion project would not occur under this alternative. Therefore, implementation of this alternative would result in similar but slightly reduced impacts related to hazardous materials.

Cultural Resources

Potential impacts involving disturbance of unknown subsurface cultural resources associated with mining in the proposed expansion area would not occur with implementation of the No Project Alternative. Therefore, this alternative would result in a reduced likelihood of potentially significant impacts on unknown subsurface cultural resources.

CONCLUSIONS

The No Project Alternative would result in a reduction of some environmental impacts, and an increase in others as compared to impacts caused by the proposed project. This alternative would not result in a lower AAPR (1.5 mty reduced to 1.25 mty) as would the proposed project, so it might not result in decreased annual truck traffic, decreased traffic noise, and decreased on-highway diesel emissions. This alternative would also increase wetland and riparian impacts related to incorporation of the reclaimed pond into the fishing lake, and could increase public exposure to methyl mercury.

The No Project Alternative, however, would eliminate ROG, PM₁₀, SO_x, and CO emissions and odors generated by the proposed asphalt batch plant. The No Project Alternative would also eliminate significant unavoidable air quality impacts generated by the proposed mine expansion and significant unavoidable noise impacts generated by mining Phase 6. This alternative would also convert substantially less farmland and oak woodland, and would remove far fewer elderberry shrubs. This alternative would also avoid or reduce certain significant and less-than-significant impacts related to visual resources; geology, minerals, and soils; water resources; biological resources; public health and safety; hazardous materials; and cultural resources.

The No Project Alternative would not achieve three basic project objectives—developing known aggregate resources in close proximity to existing processing facilities, producing asphalt, and creating new job opportunities.

HAUL ROUTE ALTERNATIVE

DESCRIPTION

Under existing conditions, haul trucks traveling to and from the Patterson mine site pass through the town of Sheridan on the way to and from SR 65 (Exhibits 17-1 and 17-2). Concerns have been expressed about noise and vibration from trucks passing through Sheridan to serve the existing mine operation. As mentioned previously, Placer County staff required the applicant to identify and assess several other potential haul routes. Several other alternate routes were considered and are discussed in Section 17.2 above; however, the Haul Route Alternative remains under consideration. If the Placer County Board of Supervisors decides to approve the Haul Route Alternative to serve the proposed mine expansion project, haul trucks serving the mine would be routed away from the existing route along Riosa Road onto the approved haul route alignment. Placer County is only considering approval of the Haul Route Alternative in combination with approval of the proposed mine expansion project, and is not considering approval of the Haul Route Alternative as a stand-alone project. Two alignments for the Haul Route Alternative are analyzed below.

Alignment 1

This haul route alignment would include the realignment of Riosa Road in the vicinity of the Andressen Road/Riosa Road intersection to eliminate two sharp curves and promote a smoother flow of traffic (Exhibit 17-2). Approximately 800 feet east of the existing intersection, Riosa Road would

Exhibit 17-1 Project Vicinity and Site Access under Existing Conditions and the Haul Route Alternative

turn southwest for approximately 800 feet, and would then turn west, creating a new intersection with Andressen Road. A new road would continue southward from the realigned section of Riosa Road, follow the Placer County E Street right-of-way, and then intersect with SR 65. Depending on the final design of the new road, the bypassed portion of Riosa Road east of Andressen Road may then be abandoned.

Outbound haul trucks would follow the existing haul route to the vicinity of Andressen Road, where it would meet the realigned section of Riosa Road southwest toward E Street, and then connects with E Street to SR 65. Trucks would then travel either northbound or southbound on SR 65 toward their destination. Returning haul trucks, and delivery vehicles, would travel along this route in the reverse direction on the same roads. This alignment would involve construction of about 2,800 feet of new road.

Alignment 2

This haul route alignment would be identical to alignment 1 up to the new Riosa Road/Andressen Road intersection (Exhibit 17-2). As with alignment 1, under Alignment 2 a new road would continue southward from the realigned section of Riosa Road; however, under this alignment, the new road would intersect with SR 65 south of the Placer County wastewater treatment ponds. Depending on the final design of the new road, the bypassed portion of Riosa Road east of Andressen Road may then be abandoned.

Outbound haul trucks would follow the existing haul route to the vicinity of Andressen Road, where it would meet the realigned section of Riosa Road which extends southwest toward the new road. Trucks would then follow the new road to SR 65. Trucks would travel either northbound or southbound on SR 65 toward their destination. Returning haul trucks, and delivery vehicles, would travel along this route in the reverse direction. This alignment would involve construction of about 3,000 feet of new road.

A new intersection and improvements to SR 65 would be required for either alignment 1 or alignment 2. Conceptual improvements to SR 65 are shown in Exhibit 17-3. These conceptual improvements are intended to be sufficiently described for environmental review only and are subject to review and approval by Caltrans.

ENVIRONMENTAL ANALYSIS

The following sections describe the environmental impacts of the Haul Route Alternative. In these sections, the “with-project” conditions for the Haul Route Alternative refer to conditions under the proposed project plus construction of one of the haul roads proposed under this alternative. Therefore, the sections below provide a description of existing conditions in the area in which either of the alternate haul roads would be constructed. These sections then list and evaluate impacts resulting specifically from the proposed construction of a new haul road.

Exhibit 17-2 Existing Haul Route and Alignments for the Haul Route Alternative
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Exhibit 17-3 State Route 65 Encroachment (Conceptual)

Because the Haul Route Alternative is not a stand-alone project, this Environmental Analysis section contains no summary comparison between this alternative and the proposed mine expansion project (as is presented in this chapter for the other alternatives under consideration). Rather, this alternative is compared against the applicant's proposed use of the existing haul route through Sheridan. It is assumed that all impacts associated with the proposed mine expansion project, as described in Chapters 4–15, would occur if the Haul Route Alternative is adopted. Therefore, for resource areas where haul road construction by itself would add no new impacts, all impacts are considered to be the same for the Haul Route Alternative as for the proposed project, and no further analysis is required.

Land Use/Agriculture

Existing Conditions Along the Haul Route Alternative Alignments

The Haul Route Alternative alignments are located entirely within Placer County. The specific land uses along Haul Route Alternative alignments 1 and 2 are described below. Single-family residences are located along the Haul Route Alternative alignments in the downtown Sheridan area, as illustrated in Exhibit 17-4. These rural residences are discussed further in the Air Quality and Noise discussions below.

As mentioned above, both alignments under the Haul Route Alternative would follow the existing route from the project site until the vicinity of the Andressen Road and Riosa Road intersection. This existing haul route is bordered by pastureland and agricultural land with residences. From Riosa Road to SR 65, the existing haul route goes through the town of Sheridan with residential, commercial, and quasi-public/public land uses including churches and a school (Exhibit 17-4). Neither alignment under the Haul Route Alternative would pass through land classified as Prime Farmland, Unique Farmland, or Farmland of Statewide Importance; however, both alignments do contain land classified as Farmland of Local Importance (California Department of Conservation 1998).

The northern (common) section of Haul Route Alternative alignments 1 and 2 is characterized by pastureland with a few nearby residences. The southern section of alignment 1 would run along the Placer County E Street right-of-way, passing by medium density residential land uses to the northwest, the county's wastewater treatment ponds and irrigation fields to the southeast, and intersecting with SR 65 adjacent to an auto parts store and garage (Exhibit 17-4). The southern section of alignment 2 is characterized by the Placer County wastewater treatment ponds and fields to the northwest, and a residence and pasture land to the southeast (Exhibit 17-4).

The soils located along the Haul Route Alternative alignments are described in the Geology, Minerals, and Soils section below. Neither of the Haul Route Alternative alignments passes through NRCS-designated Prime Farmland soils. None of the parcels along the Haul Route Alternative alignments is under a Williamson Act contract.

Exhibit 17-4 Existing and Alternate Haul Routes and Surrounding Land Uses
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Land Use Consistency

Placer County General Plan. The Placer County General Plan contains goals, policies, standards and implementation programs that constitute Placer County’s formal policies for land use, development, and environmental quality. The general plan was reviewed for goals and policies specifically applicable to the construction of new haul road. The results are presented in Table 17-1.

Sheridan General Plan. Both Haul Route Alternative alignments would pass through the Sheridan General Plan area. The Sheridan General Plan Land Use Diagram designates land uses along the existing haul route as “Rural Residential” (1 dwelling unit [du]/2.3–5 acres), “Medium Density Residential” (2–4 du/acre), and General Commercial. Similarly, Haul Route Alternative alignments 1 and 2 pass through the land use designations of Rural Residential and Medium Density Residential. Haul Route Alternative alignment 2 would also pass through the designation of “Rural Estate” (1 du/5–20 acres). A land use consistency analysis is presented in Table 17-1.

Table 17-1	
Land Use Plan Consistency Analysis for the Haul Route Alternative	
Placer County General Plan	
<i>Open Space, Habitat, and Wildlife Resources</i>	
Goal 1.I:	To establish and maintain interconnected greenbelts and open spaces for the protection of native vegetation and wildlife and for the community’s enjoyment.
<u>Consistent.</u>	Neither of the Haul Route Alternative alignments under consideration would bisect any wildlife corridors, and the required mitigation measures would protect special-status plant and wildlife species.
<i>Visual and Scenic Resources</i>	
Policy 1.K.5:	The County shall require that new roads, parking and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.
<u>Consistent.</u>	No new utility lines are proposed. The new haul road would be designed to fit the natural terrain and would appear within the overall context of the existing visual character of the area.
<i>Streets and Highways</i>	
Goal 3.A:	To provide for the long-range planning and development of the county’s roadway system to ensure the safe and efficient movement of people and goods.
Policy 3.A.1:	The County shall plan, design, and regulate roadways in accordance with the functional classification system described in Part I of this <i>Policy Document</i> and reflected in the <i>Circulation Plan Diagram</i> .

<p align="center">Table 17-1 Land Use Plan Consistency Analysis for the Haul Route Alternative</p>	
<u><i>Consistent.</i></u>	Under this alternative, Placer County would plan, design, and regulate roadways in accordance with this functional classification system.
Policy 3.A.2:	Streets and roads shall be dedicated, widened, and constructed according to the roadway design and access standards generally defined in Section I of this <i>Policy Document</i> and, more specifically, in <i>community plans</i> and the <i>County's Highway Deficiencies Report</i> . Exceptions to these standards may be necessary but should be kept to a minimum and shall be permitted only upon determination by the Public Works Director that safe and adequate public access and circulation are preserved by such exceptions.
<u><i>Consistent.</i></u>	Placer County would ensure compliance with this policy during haul road design and construction.
Policy 3.A.3:	The County shall require that roadway rights-of-way be wide enough to accommodate the travel lanes needed to carry long-range forecasted traffic volumes (beyond 2010), as well as any planned bikeways and required drainage, utilities, landscaping, and suitable separations. Minimum right-of-way criteria for each class of roadway in the county are specified in Part I of this <i>Policy Document</i> .
<u><i>Consistent.</i></u>	Placer County would ensure compliance with this policy during haul road design and construction.
Policy 3.A.5:	Through-traffic shall be accommodated in a manner that discourages the use of neighborhood roadways, particularly local streets. This through-traffic, including through truck traffic, shall be directed to appropriate routes in order to maintain public safety and local quality of life.
<u><i>Consistent.</i></u>	All project-related truck traffic would be routed via truck routes in a manner that would maintain public safety and local quality of life.
<i>Cultural Resources</i>	
Goal 5.D:	To identify, protect, and enhance Placer County's important historical, archaeological, paleontological, and cultural sites and their contributing environment.
<u><i>Consistent.</i></u>	The cultural resources reports prepared by Peak & Associates concluded that no known cultural resources occur along the Haul Route Alternative alignments. Mitigation Measure 17-20 described below requires Placer County to mitigate impacts if any previously unknown cultural resources are found.
Policy 5.D.3:	The County shall solicit the views of the Native American Heritage Commission and/or the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or to sites of cultural importance.

<p align="center">Table 17-1</p> <p align="center">Land Use Plan Consistency Analysis for the Haul Route Alternative</p>	
<u><i>Consistent.</i></u>	The cultural resources report prepared by Peak & Associates concluded that no known Native American sites occur along the Haul Route Alternative alignments. Mitigation Measure 17-20 described below requires the applicant to consult with the Native American Heritage Commission if previously unknown Native American cultural resources are found.
Policy 5.D.6:	The County shall require that discretionary development projects identify and protect from damage, destruction, and abuse, important historical, archaeological, paleontological, and cultural sites and their contributing environment. Such assessments shall be incorporated into a countywide cultural resource data base, to be maintained by the Department of Museums.
<u><i>Consistent.</i></u>	The cultural resources reports prepared by Jensen & Associates and Peak & Associates concluded that no known cultural resources occur within the Haul Route Alternative alignments. EIR mitigation measures require the project applicant to mitigate impacts if any previously unknown cultural resources are found. As discussed below, no known paleontological resources are known to occur within the Haul Route Alternative alignments. EIR mitigation measures require the applicant to mitigate impacts if any previously unknown paleontological resources are found.
Policy 5.D.7:	The County shall require that discretionary development projects are designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determinations of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical, or paleontological consultants, depending on the type of resource in question.
<u><i>Consistent.</i></u>	The cultural resources reports prepared by Jensen & Associates and Peak & Associates concluded that no known cultural resources occur within the Haul Route Alternative alignments. EIR mitigation measures require the project applicant to mitigate impacts if any previously unknown cultural resources are found. As discussed below, no known paleontological resources are known to occur within the Haul Route Alternative alignments. EIR mitigation measures require the applicant to mitigate impacts if any previously unknown paleontological resources are found.
<i>Noise</i>	
Policy 9.A.9:	Noise created by new transportation noise sources, including roadway improvement projects; shall be mitigated so as not to exceed the levels specified in Table 9-3 at outdoor activity areas or interior spaces of existing noise-sensitive land uses.

Table 17-1
Land Use Plan Consistency Analysis for the Haul Route Alternative

<u><i>Consistent.</i></u>	As discussed in Chapter 9 (Noise), existing traffic along Riosa Road currently exceeds Placer County noise standards. Placer County, therefore, is considering construction of a new haul road to bypass downtown Sheridan. Vehicles traveling on a new haul road would not represent a new noise source, but rather a source that has been relocated from the existing haul road. As discussed in Impact 17-12 and Mitigation Measure 17-12, a noise barrier would be constructed along Haul Route Alternative alignment 1, if that alternative alignment is selected. However, mitigation measures to reduce predicted noise levels to meet County standards, and to comply with this General Plan policy, would only be feasible along haul route Alternative 2. Therefore, only haul route Alternative 2 would be consistent with this policy.
Policy 9.A.11:	The County shall implement one or more of the following mitigation measures where existing noise levels significantly impact existing noise-sensitive land uses, or where the cumulative increase in noise levels resulting from new development significantly impacts noise-sensitive land uses: <ul style="list-style-type: none"> i. Rerouting traffic onto streets that have available traffic capacity and that do not adjoin noise-sensitive land uses; ii. Lowering speed limits, if feasible and practical; iii. Programs to pay for noise mitigation such as low cost loans to owners of noise-impacted property or establishment of developer fees; iv. Acoustical treatment of buildings; or v. Construction of noise barriers.
<u><i>Consistent.</i></u>	As discussed in Chapter 9 (Noise), existing traffic along Riosa Road currently exceeds Placer County noise standards. Placer County, therefore, is considering construction of a new haul road to bypass downtown Sheridan. As discussed in Impact 17-12 and Mitigation Measure 17-12, a noise barrier would be constructed along Haul Route Alternative alignment 1, if that alternative alignment is selected. This alternative would be consistent with this policy.
Policy 9.A.12:	Where noise mitigation measures are required to achieve the standards of Tables 9-1 and 9-3, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.
<u><i>Consistent.</i></u>	Placer County is considering two alternative haul routes that would bypass downtown Sheridan. Alignment 2 would be located farther south of Sheridan than alignment 1, and is being considered by the County to evaluate alternative designs that minimize traffic noise at nearby residences. As discussed in Impact 17-12 and Mitigation Measure 17-12, a noise barrier would be constructed along Haul Route Alternative alignment 1, if that alternative alignment is selected. This alternative would be consistent with this policy.
Sheridan General Plan Circulation and Transportation Goals and Policies	
Goal 1:	Establish a safe, efficient and interrelated transportation system to serve the needs of all citizens.

<p style="text-align: center;">Table 17-1 Land Use Plan Consistency Analysis for the Haul Route Alternative</p>	
Policy 1:	Planning for and construction of transportation facilities should entail no substantial adverse impact upon the environment.
<u><i>Consistent.</i></u>	Environmental impacts resulting from haul road construction would be temporary, and all would be less-than-significant after mitigation, except short-term air quality impacts. All operational impacts would be less than significant after mitigation. Because a new haul road would divert trucks and other nonproject traffic around downtown Sheridan, it would reduce traffic volumes at downtown Sheridan intersections. Because fewer residences would be located near the Haul Route Alternative alignments than are located along Riosa Road in downtown Sheridan, this alternative would reduce noise and health risk impacts related to haul truck traffic.
Policy 2:	Existing highways and arterial roadways should be improved and used wherever possible to avoid the need for new alignments.
<u><i>Consistent.</i></u>	Riosa Road passes through the town on Sheridan, and limited opportunities for highway improvements are available (e.g., widening, noise barriers).
Sources: Placer County 1994, Yuba County 1996, EDAW 2002	

Impacts of the Haul Route Alternative



Conversion of Farmland Along Haul Route Alternative Alignments. *The Haul Route Alternative alignments are not classified as state-designated Farmland or as federally designated Prime Farmland and would not result in the conversion of state-designated or NRCS-designated Farmland. This impact is considered **less than significant**.*

Neither Haul Route Alternative alignment passes through areas classified as state-designated Farmland or as Prime Farmland designated by NRCS. Therefore, construction of a new haul road would not result in the conversion of state-designated or NRCS-designated Farmland. This impact is therefore considered less than significant.

Mitigation Measures

No mitigation measures are necessary for the following *less-than-significant* impact.

17-1: Conversion of Farmland Along Haul Route Alternative Alignments

Level of Significance after Mitigation

No significant impacts related to land use would result from implementation of the Haul Route Alternative.

Visual Resources

Existing Conditions Along the Haul Route Alternative Alignments

The northern (common) section of both Haul Route Alternative alignments is characterized by relatively flat pastureland with a few nearby residences. The southern section of alignment 1 along the Placer County E Street right-of-way is characterized by medium density single-family homes to the northwest, and the Placer County wastewater treatment ponds and irrigation fields to the southeast. The southern section of alignment 2 is characterized by the Placer County wastewater treatment ponds and fields to the northwest, and a residence and relatively flat pastureland to the southeast. There are no scenic vistas or designated scenic highways within the vicinity of either proposed haul road (Caltrans 1999).

Impacts of the Haul Route Alternative

Impact 17-2

Short-term Effects on Views Resulting from Haul Road Construction. Construction of a new haul road would temporarily affect views of the haul route alignment during the construction period. During this time, views of the haul route alignment would include heavy machinery, construction materials, and excavated soil. However, construction would be temporary, and there are no scenic vistas or highways within the vicinity of either Haul Route Alternative alignment. Therefore, this impact is considered **less than significant**.

Construction of a new haul road (under either alignment) would temporarily affect views of the haul route within the immediate vicinity of the project area. Construction-related activities would include the excavation of soil, operation of heavy machinery, and stockpiling of materials, and work crews would be present. Although construction equipment and activities would be seen from nearby residences and roadways (e.g., Ranch House Road, Riosa Road, SR 65), these activities would be temporary. In addition, there are no scenic vistas or designated scenic highways within the vicinity of either of the Haul Route Alternative alignments; therefore, construction activities would not affect any scenic vista or designated scenic highway. This impact is considered less than significant.

Impact 17-3

Long-term Effects on Views Caused by a New Haul Road. The long-term presence of a new haul road would not substantially alter the existing visual character of the surrounding area. A new haul road would be visible from the surrounding area but would appear within the overall context of the existing visual character of Sheridan. In addition, there are no scenic vistas or designated scenic highways in the vicinity of the Haul Route Alternative alignments. Consequently, this impact is considered **less than significant**.

Operation of a new haul road would not substantially change the visual character of the surrounding area. The Sheridan area is characterized by views of pastureland with residences, rural roads, and wastewater treatment ponds. There are no scenic vistas or designated scenic highways within the vicinity of either proposed haul road (Caltrans 1999). Views of the rural roads near Sheridan now include both mine-related vehicles (including haul trucks) and non-mine related vehicles (including large agricultural vehicles). A new haul road would add more rural roadways to the current view. Views of a new haul road would include the mine-related and non mine-related traffic now traveling

on existing County roads near Sheridan, but diverted to the new haul road. A new road would be a rural road similar to the existing rural roads in the vicinity of Sheridan and would be consistent with the overall context of the surrounding views. Thus, a new haul road would not substantially alter the existing visual character of the surrounding area. Therefore, this impact is considered less than significant.

Impact
17-4

Adverse Effects on Nighttime Views Resulting from Construction-Related Lighting.

Construction of a new haul road could include nighttime activity. Construction-related lighting, if needed, would generally be limited to nighttime hours. Because the vicinity of the Haul Route Alternative alignments does not currently experience intense lighting at night, high intensity lighting during nighttime hours could be considered obtrusive to adjacent residences. Therefore, this impact is considered **potentially significant**.

Construction-related lighting could be necessary during the construction of a new haul road. Construction-related lighting generally occurs during nighttime hours except in foggy situations when lighting might be necessary. The vicinity of the Haul Route Alternative alignments does not currently experience much light during the nighttime hours, and construction could occur directly adjacent to nearby residences. Therefore, nighttime construction-related lighting, although temporary, could be intrusive to the residences adjacent to the alternate routes. Therefore, this impact is considered potentially significant.

Mitigation Measures

No mitigation measures are necessary for the following *less-than-significant* impacts.

- 17-2: Short-term Effects on Views Resulting from Haul Road Construction
- 17-3: Long-term Effects on Views Caused by a New Haul Road

A mitigation measure is provided below for the *potentially significant* impact of the Haul Route Alternative.

Mitigation Measure R17-4: Limit Haul Road Construction to Daytime Hours. The applicant shall limit construction of a new haul road to daylight hours to eliminate the need for nighttime construction lighting.

Level of Significance after Mitigation

Following implementation of the above mitigation measure, all potential impacts related to visual resources would be reduced to a *less-than-significant* level.

Public Services

Impacts on public services under the Haul Route Alternative would be similar to those under the proposed project. No new impacts would result from construction of a new haul road.

Traffic

Existing Conditions Along the Haul Route Alternative Alignments

A number of roadways in unincorporated Placer County have been designated as truck routes. Any future improvements that may be made to these roadways to accommodate subsequent development under the proposed project must consider their truck route designation and design standard. Trucks weighing more than 7 tons are prohibited on Camp Far West Road between Sheridan and Porter Road. Because no road currently exists in either alignment under consideration, there are no existing intersections at SR 65 with the Haul Route Alternative alignments.

Under existing conditions, haul trucks traveling to and from the Patterson mine site pass through the town of Sheridan on Riosa Road. Within Sheridan, haul trucks currently pass through the intersections of Riosa Road/SR 65 and Riosa Road/11th Street. East of Sheridan, haul trucks pass through the intersection of Riosa Road/Karchner Road. Under the Haul Route Alternative, haul trucks would bypass Sheridan using a new road, and travel through the intersections of Riosa Road/SR 65 and Riosa Road/11th Street. Haul trucks would still pass through the intersection of Riosa Road/Karchner Road.

Impacts of the Haul Route Alternative

As mentioned previously (see Description section above), the Haul Route Alternative is being considered as a potential additional element of the proposed mine expansion project, contingent on approval of the proposed project, rather than as a stand-alone alternative. For this reason, rather than specifically referring to the Haul Route Alternative, the impact discussion below refers to “existing-plus-project” or “existing-plus-project (with new haul road)” conditions for the scenario that would occur under this alternative.

Impact
17-5

Potential Decline in Levels of Service in Sheridan under the Haul Route Alternative.

*Traffic volumes occurring as a result of existing-plus-project conditions under either the AAPR or the MAPR scenario would not worsen the overall intersection LOS at intersections in Sheridan. This impact is considered **less than significant**.*

Exhibit 17-5 shows the additional traffic that would be generated by the proposed mine expansion project on an average day during the peak production months. Exhibit 17-6 shows the turning movements for an average day under existing-plus-project conditions, with either of the proposed new haul roads. For the SR 65/Riosa Road intersection in Sheridan, Table 17-2 shows that the overall intersection LOS would be LOS C or better under all circumstances. The worst movement (westbound vehicles) delay and LOS are also displayed in Table 17-2. Assuming mine operations at the AAPR, the LOS at SR 65/Riosa Road for the existing-plus-project scenario (with a new haul road in place), which range from LOS A to LOS C, would be improved over the LOS for existing conditions, which range from LOS A to LOS F. In addition, delay per vehicle would be reduced in all cases. Therefore, the impact on the SR 65/Riosa Road intersection is considered less than significant. Under existing-plus-project conditions with mine production at the MAPR, the overall intersection LOS would remain at LOS C or better. The westbound Riosa Road approach would have LOS B with a new haul road in place.

Exhibit 17-5 Existing Daily Traffic Volumes Plus Project (Average Day), with New Haul Road

Exhibit 17-6 Existing Peak-Hour Volumes Plus Project (Average Day), With New Haul Road

Table 17-2 LOS at SR 65/Riosa Road Intersection—Existing Conditions								
	A.M. Peak Hour				P.M. Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate								
Average Day	A	4.3	E	37.2	A	2.5	D	33.3
30 th Highest Day	A	7.3	F	56.9	A	2.7	E	35.5
Highest Day	B	13.1	F	91.1	A	2.9	E	37.3
Existing-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate								
Average Day	A	0.9	B	14.7	A	1.3	C	21.6
30 th Highest Day	A	0.9	B	14.8	A	1.3	C	21.6
Highest Day	A	0.9	B	14.9	A	1.3	C	21.6
Existing-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate								
Highest Day	A	0.9	B	15.0	A	1.3	C	21.7
Source: DKS Associates 2003								

An LOS analysis was also conducted for two other intersections in Sheridan. Table 17-3 and Table 17-4 show the LOS at the Riosa Road/11th Street and Riosa Road/Karchner Road intersections, respectively, under existing conditions. Both intersections experience low volumes and operate at LOS A or B under existing conditions. Both would continue to operate at LOS A or B under existing-plus-project conditions under both the AAPR and MAPR mine production scenarios.

Table 17-3 LOS at Riosa Road/11th Street Intersection—Existing Conditions				
	A.M. Peak Hour Overall Intersection		P.M. Peak Hour Overall Intersection	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate				
Average Day	A	8.4	A	7.6
30 th Highest Day	A	8.9	A	7.7
Highest Day	A	9.4	A	7.8
Existing-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate				
Average Day	A	7.1	A	7.2
30 th Highest Day	A	7.1	A	7.2
Highest Day	A	7.1	A	7.2
Existing-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate				
Highest Day	A	7.1	A	7.2
Source: DKS Associates 2003				

Table 17-4 LOS at Riosa Road/Karchner Road Intersection—Existing Conditions								
	A.M. Peak Hour				P.M. Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing Conditions: Existing Average Annual Production Rate								
Average Day	A	5.4	A	9.7	A	3.8	A	8.9
30 th Highest Day	A	6.2	A	9.9	A	4.1	A	9.3
Highest Day	A	6.8	B	10.1	A	4.3	A	9.1
Existing-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate								
Average Day	A	5.1	B	9.6	A	3.8	A	8.8
30 th Highest Day	A	5.8	B	9.8	A	4.0	A	8.9
Highest Day	A	6.4	B	10.0	A	4.2	A	9.0
Existing-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate								
Highest Day	A	7.1	B	10.3	A	4.5	A	9.1
Source: DKS Associates 2003								

The new intersection created by connecting a new haul road to SR 65 would be used by trucks traveling to and from the proposed project and other vehicles diverted from the center of Sheridan. Table 17-5 shows the LOS for this intersection under existing-plus- project conditions. Note that there is only one set of LOS numbers for the new intersection created by constructing a new haul road. An assumption has been made that the volume of heavy duty and light duty vehicles using a new haul road would be the same regardless of which new haul road is built. This assumption has been made because there are not sufficient data to determine whether the volume of traffic diverting from central Sheridan would vary by haul route. The same assumptions for project-related traffic and nonproject-related traffic have been used for both Haul Route Alternative alignments.

Table 17-5 LOS at SR 65/“New Haul Road”—Existing Conditions								
	A.M. Peak Hour				P.M. Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
Existing-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate								
Average Day	A	2.1	E	35.7	A	0.8	D	29.6
30 th Highest Day	A	3.5	E	46.7	A	0.9	D	31.4
Highest Day	A	5.6	F	62.2	A	1.0	D	32.7
Existing-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate								
Highest Day	B	12.7	F	111.7	A	1.1	E	35.3
Source: DKS Associates 2003								

This newly created intersection (SR 65/“new haul road”) would operate at overall LOS A under all existing plus-project scenarios. As with the SR 65/Riosa Road intersection, the longest delays at this intersection would be experienced at the westbound approach. Signal warrants would probably indicate that this intersection is a candidate for a traffic signal. Placer County would have to discuss with Caltrans the desirability of a signal at either of the potential locations. Funding arrangements for a potential signal would have to be arranged in agreement between Placer County, Caltrans, and the project applicant.

The overall LOS at intersections in Sheridan would not decline under either the AAPR or the MAPR scenario as a result of existing-plus-project traffic volumes. Therefore, this impact is considered less than significant.

Impact
17-6

Potential Decline in Levels of Service in Sheridan (2020 Conditions) under the Haul Route Alternative. *Traffic volumes occurring as a result of 2020-plus-project conditions under either the AAPR or the MAPR scenario would not worsen the overall intersection LOS at intersections in Sheridan. In addition, traffic volumes occurring as a result of the 2020-plus-MAPR condition would not worsen the overall intersection LOS at intersections in Sheridan. This impact is considered **less than significant**.*

Exhibit 17-7 shows the additional daily traffic that would be generated by the proposed mine expansion project in 2020 on an average day during the peak production months if one of the two potential haul roads were to be constructed. Exhibit 17-8 shows the 2020-plus-project turning movements for an average day during the peak production months with a new haul road. A LOS analysis was conducted for the SR 65/Riosa Road intersection for 2020 conditions with and without the proposed project. This analysis is summarized in Table 17-6. A preliminary signal warrant analysis was also conducted using peak period traffic count data. That analysis indicates that this intersection appears to meet signal warrants under 2020 conditions.

A preliminary analysis conducted has indicated that the intersection currently meets the peak-hour volume warrant for a traffic signal. Discussions with Caltrans personnel indicate that they do not have any current plans to signalize the intersection (Brake, pers. Comm., 1998). The Union Pacific railroad tracks cross SR 65 approximately 120–150 feet north of Riosa Road, adding a level of complexity to a signal at this location that has both cost and safety implications. Once the Lincoln Bypass project is complete, the volume of traffic on SR 65 at this intersection is projected to decrease and Caltrans will relinquish the intersection to Placer County for maintenance responsibilities. Therefore, based on these factors, it is unlikely that the SR 65/Riosa Road intersection will be signalized, and it is assumed to remain stop-sign controlled in the scenarios.

Table 17-6 shows that the overall intersection LOS is LOS A–C under all circumstances. The worst movement (westbound vehicles) delay and LOS are also displayed in Table 17-6. The SR 65/Riosa Road intersection would have improved LOS (from LOS A–F to LOS A–C) and decreased delay per vehicle in all cases under 2020-plus-AAPR cases. Under the 2020-plus-MAPR conditions, the overall intersection LOS would remain at C or better.

Exhibit 17-7 Year 2020 Daily Traffic Volumes Plus Project (Average Day), With New Haul Road

Exhibit 17-8 Year 2020 Peak-Hour Volumes Plus Project (Average Day), With New Haul Road

Table 17-6 LOS at SR 65/Riosa Road Intersection—2020 Conditions								
	A.M. Peak Hour				P.M. Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project Conditions: Existing Average Annual Production Rate								
Average Day	A	6.7	D	28.5	A	4.7	E	35.4
30 th Highest Day	A	9.9	E	40.5	A	5.0	E	37.4
Highest Day	C	15.8	F	61.9	A	5.2	E	39.8
2020-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate								
Average Day	A	2.2	B	13.5	A	2.5	C	20.2
30 th Highest Day	A	2.2	B	13.5	A	2.5	C	20.2
Highest Day	A	2.2	B	13.6	A	2.5	C	20.2
2020-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate								
Highest Day	A	2.2	B	13.7	A	2.5	C	20.2
Source: DKS Associates 2003								

An LOS analysis was also conducted for two other intersections in Sheridan for 2020 conditions. Table 17-7 and Table 17-8 show the LOS at the Riosa Road/11th Street and Riosa Road/Karchner Road intersections, respectively, under both 2020 conditions. Both intersections experience low volumes and would operate at LOS A or B under 2020 conditions, and 2020-plus-project conditions under the AAPR and the MAPR scenarios. This impact is considered less than significant.

Table 17-7 LOS at Riosa Road / 11th Street—2020 Conditions				
	A.M. Peak Hour Overall Intersection		P.M. Peak Hour Overall Intersection	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project Conditions: Existing Average Annual Production Rate				
Average Day	A	8.9	A	8.0
30 th Highest Day	A	9.4	A	8.0
Highest Day	A	10.0	A	8.1
2020-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate				
Average Day	A	7.6	A	7.5
30 th Highest Day	A	7.6	A	7.5
Highest Day	A	7.6	A	7.5
2020-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate				
Highest Day	A	7.6	A	7.5
Source: DKS Associates 2003				

Table 17-8 LOS at Riosa Road/Karchner Road Intersection—2020 Conditions								
	A.M. Peak Hour				P.M. Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020 No Project Conditions: Existing Average Annual Production Rate								
Average Day	A	4.5	A	10.0	A	3.8	A	9.1
30 th Highest Day	A	5.2	B	10.2	A	4.0	A	9.1
Highest Day	A	5.7	B	10.5	A	4.1	A	9.2
2020-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate								
Average Day	A	4.3	A	9.9	A	3.8	A	9.0
30 th Highest Day	A	4.9	B	10.1	A	4.0	A	9.3
Highest Day	A	5.4	B	10.3	A	4.1	A	9.1
2020-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate								
Highest Day	A	6.1	B	10.7	A	4.3	A	9.2
Source: DKS Associates 2003								

The new intersection created by connecting a new haul road to SR 65 would be used by trucks traveling to and from the proposed project and other vehicles diverted from the center of Sheridan. Table 17-9 shows the LOS for this intersection under 2020-plus-project conditions. This intersection would operate at overall LOS A–C under all 2020-plus-project scenarios. As with SR 65/Riosa Road, the westbound approach would experience the longest delays at this intersection.

Table 17-9 LOS at SR 65/“New Haul Road”—2020 Conditions								
	A.M. Peak Hour				P.M. Peak Hour			
	Overall Intersection		Worst Movement		Overall Intersection		Worst Movement	
	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)	Level of Service	Delay per Vehicle (sec)
2020-Plus-Project (With New Haul Road) Conditions: Average Annual Production Rate								
Average Day	A	2.3	C	22.5	A	1.0	C	22.2
30 th Highest Day	A	3.2	D	26.8	A	1.1	C	22.9
Highest Day	A	4.4	D	32.4	A	1.2	C	23.8
2020-Plus-Project (With New Haul Road) Conditions: Maximum Annual Production Rate								
Highest Day	A	7.6	E	47.4	A	1.3	D	25.1
Source: DKS Associates 2003								

Traffic volumes occurring as a result of 2020-plus-project conditions under either the AAPR or the MAPR scenario would not worsen the overall intersection LOS at intersections in Sheridan. In addition, traffic volumes occurring as a result of the 2020-plus-MAPR condition would not worsen the overall intersection LOS at intersections in Sheridan. Therefore, this impact is considered less than significant.

Impact
17-7

Roadway Deterioration. Trucks and other vehicles traveling to and from the project site would travel on County roads, including a new haul road if constructed, for about 30 more years than currently permitted by the existing CUP. Because the project would require pavement reconstruction on segments of Placer County's roadway system during the life of the new CUP, the project would result in a **significant** impact related to roadway deterioration.

The volume of project generated truck and light duty vehicle traffic traveling on Placer County roads would decrease on an average annual basis under the AAPR scenario. The proposed mine expansion project, however, would extend the duration of mining activities by approximately 30 years. As a result, trucks and other vehicles traveling to and from the project site would travel on County roads, including a new haul road if constructed, for about 30 more years than currently permitted by the existing CUP. Because the project would require pavement reconstruction on segments of Placer County's roadway system (including a new haul road) during the life of the new CUP, this alternative would result in a significant impact related to roadway deterioration.

Mitigation Measures

No mitigation measures are necessary for the following *less-than-significant* impacts.

I7-5: Potential Decline in Levels of Service in Sheridan

I7-6: Potential Decline in Levels of Service in Sheridan (2020 Conditions)

A mitigation measure is provided below for the significant traffic impact of the Haul Route Alternative.

Mitigation Measure R17-7: Implement Mitigation Measure R7-5. The applicant shall implement Mitigation Measure R7-5, Contribute Fair Share Funding of Roadway Maintenance. This mitigation measure is described in Chapter 7, Traffic.

Level of Significance after Mitigation

Following implementation of the above mitigation measure, all *significant* impacts related to traffic would be reduced to a *less-than-significant* level.

Air Quality

Existing Conditions Along the Haul Route Alternative Alignments

Existing air quality conditions along the Haul Route Alternative alignments would be similar to conditions in the project area for the proposed mine expansion project; see Chapter 8, Air Quality, for a description.

Impacts of the Haul Route Alternative

Impact
17-8

Short-Term Increases in Offsite Emissions of Regional Criteria Pollutants and Precursors. *Estimated increases in offsite short-term construction-related emissions of ROG, NO_x, and PM₁₀ would exceed applicable thresholds. As a result, this impact is considered **significant**.*

Construction of a new haul road would involve several activities that would generate short-term concentrations of air pollutants. The four basic construction activities associated with the proposed project are clearing and grubbing, grading, paving, and striping. Clearing and grubbing of trees and other various shrubs would occur first, followed by grading and the application of paving material.

At this time the specific types of equipment that would be used during the clearing and grubbing, grading, paving, and striping construction phases, as well as the estimated duration of construction, is not known. However, based on similar projects, construction of the proposed roadways is anticipated to require the use of approximately three to six pieces of heavy-duty construction equipment on any given day. In addition, project construction would be required to comply with applicable PCAPD rules regarding fugitive dust, the application of architectural coatings, and use of cutback and emulsified asphalt paving materials.

Estimated daily construction-generated emissions were calculated assuming a maximum of six pieces of equipment operating 8 hours per day, and assuming a total of 20 daily construction crew trips, 20 daily haul truck trips, and 1 acre of active disturbance. The maximum area to be paved was estimated at approximately 1.5 acres, over an approximate 10-day period. Emissions factors for the various emission sources were obtained from the EPA AP-42 Emissions Manual, the SMAQMD ROADMOD spreadsheet, and the SMAQMD Air Quality Significance Thresholds. Assuming that grading and paving activities could occur simultaneously, approximately 10 pounds of ROG, 99 pounds of NO_x, 338 pounds of PM₁₀, and 2 pounds of SO_x could be generated on any given day. Based on the modeling conducted, maximum daily increases in offsite emissions would exceed the PCAPCD's recommended significance thresholds of 82 pounds per day (lb/day) for NO_x and PM₁₀. As a result, this impact is considered significant.

Localized Concentrations of Diesel Exhaust Particulate Matter at Offsite Sources Along the Haul Route Alternative Alignments. Predicted “worst-case” airborne concentrations of diesel particulate matter would not result in increased cancer risks to nearby sensitive receptors exceeding applicable standards. This impact is considered **less than significant**.

The proposed project would contribute to offsite emissions of diesel exhaust particulate matter at receptors located along the Haul Route Alternative alignments. Within the town of Sheridan, peak impacts of diesel exhaust particulate matter were estimated by the ISCST3 model to occur near the public roads used by product haul trucks. Annual average concentrations and corresponding cancer risks were modeled for exposures at the maximally exposed residential, workplace, and sensitive receptors (see Impact 8-8 in Chapter 8, Air Quality, for discussion). Modeled concentrations and estimated carcinogenic risks are summarized in Table 17-10.

Table 17-10 Summary of Diesel Exhaust Particulate Matter Cancer Risks within Sheridan Along the Haul Route Alternative Alignments				
Receptor Type	Maximum Modeled Annual Average Impact ($\mu\text{g}/\text{m}^3$)	Unit Risk Value ($\mu\text{g}/\text{m}^3$) ⁻¹	Time Adjustment Factor	Cancer Risk
Haul Route Alternative Alignment 1				
Residential	0.0271	3.0×10^{-4}	1	8.1×10^{-6}
Workplace	0.0102	3.0×10^{-4}	0.66	2.6×10^{-6}
Sensitive	0.0271	3.0×10^{-4}	1	8.1×10^{-6}
Haul Route Alternative Alignment 2				
Residential	0.0301	3.0×10^{-4}	1	9.0×10^{-6}
Workplace	0.0035	3.0×10^{-4}	0.66	0.69×10^{-6}
Sensitive	0.0301	3.0×10^{-4}	1	9.0×10^{-6}
Represents the maximum predicted cancer risk. Source: Sierra Research 2002b				

As shown in Table 17-10, the estimated cancer risks are highest at residential receptors and other potentially sensitive receptor sites. These risks are lower for the Haul Route Alternative alignments than for the existing haul route along Riosa Road, under proposed project conditions (see Table 8-15), because the Haul Route Alternative alignments pass near fewer sensitive receptors. The average diesel exhaust particulate matter emission rate of on-highway heavy-duty haul trucks in the future will be lower than that of the current fleet, however, because of the future implementation of federal and state emission control standards; consequently, the estimates of risk for the haul routes are conservatively overestimated in this analysis. Based on the modeling conducted, predicted cancer risks along the Haul Route Alternative alignments would not exceed the cancer risk threshold of 10 in 1 million.

Table 17-11 shows the maximum modeled annual average concentrations for exposures at the maximally exposed residential, workplace, and sensitive receptors, the REL for chronic noncancer impacts, and the

corresponding hazard index resulting from the modeled exposure levels at these locations. As shown in Table 17-11, the estimated chronic hazard indices at the maximally exposed receptors are less than the chronic inhalation REL for diesel exhaust particulate matter.

Increases in cancer risk and chronic noncancer risk attributable to the proposed project would not exceed applicable thresholds for receptors located along either of the Haul Route Alternative alignments. As a result, this impact is considered less than significant.

<p align="center">Table 17-11 Summary of Modeled Chronic Hazard Indices Within Sheridan Along the Haul Route Alternative alignments</p>			
Receptor Type	Maximum Modeled Annual Impact ($\mu\text{g}/\text{m}^3$)	Chronic Reference Exposure Level ($\mu\text{g}/\text{m}^3$)	Chronic Hazard Index
Haul Route Alternative Alignment 1			
Residential	0.0271	5	0.0054
Workplace	0.0102	5	0.0020
Sensitive	0.0271	5	0.0054
Haul Route Alternative Alignment 2			
Residential	0.0301	5	0.0060
Workplace	0.0035	5	0.0007
Sensitive	0.0301	5	0.0060
Source: Sierra Research 2002b			

**Impact
17-10**

Localized Concentrations of Carbon Monoxide Emissions Along the Haul Route Alternative Alignments. Vehicle trips attributable to the proposed mine expansion project would generate CO, a mobile-source pollutant of local concern. However, western Placer and Yuba counties are in compliance with ambient air quality standards for CO, and CO concentrations are not projected to exceed ambient air quality standards at intersections affected by the proposed mine expansion project. Therefore, this impact is considered **less than significant**.

The primary mobile-source criteria pollutant of local concern is CO. Concentrations of CO are a direct function of vehicle idling time and, thus, traffic flow conditions. Transport of this criteria pollutant is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to a congested roadway or intersection may reach unhealthy levels, affecting local sensitive receptors (residents, school children, hospital patients, the elderly, etc.). Typically, areas of high CO concentrations, or “hot spots,” are associated with roadways or intersections operating at unacceptable levels of service (LOS D or worse), or at receptors located near major stationary combustion sources.

With construction of a new haul road along either of the proposed alignments, the level of service at the Riosa Road/SR 65 intersection would be anticipated to improve slightly because of predicted reductions in haul truck traffic, and would continue to operate at an overall LOS A. Based on the traffic analysis

conducted for this project, the newly created intersection of SR 65 with either of the Haul Route Alternative alignments would be predicted to operate at an overall LOS A. As a result, localized concentrations of offsite mobile-source CO would not be anticipated to exceed applicable standards. As a result, localized increases in CO concentrations at offsite locations are considered less than significant.

Mitigation Measures

No mitigation measures are required for the following *less-than-significant* impacts.

17-9: Localized Concentrations of Diesel Exhaust Particulate Matter Offsite Sources Along the Haul Route Alternative Alignments

17-10: Localized Concentrations of CO Emissions Along the Haul Route Alternative Alignments

Mitigation measures are provided below for the *significant* impact of the Haul Route Alternative.

Mitigation Measure R17-8(a): Implement Mitigation Measure R8-1(a). The applicant shall implement Mitigation Measure R8-1(a), Prepare and Implement a Construction Dust Mitigation Plan, for haul road construction. This mitigation measure is described in Chapter 8, Air Quality.

Mitigation Measure R17-8(b): Implement Mitigation Measure R8-1(b). The applicant shall implement Mitigation Measure R8-1(b), Properly Maintain and Use Off-Road Diesel Equipment, for haul road construction. This mitigation measure is described in Chapter 8, Air Quality.

Mitigation Measure R17-8(c): Implement Mitigation Measure R8-1(c). The applicant shall implement Mitigation Measure R8-1(c), Control Visible Emissions From Off-Road Diesel-Powered Equipment, for haul road construction. This mitigation measure is described in Chapter 8, Air Quality.

Level of Significance after Mitigation

Impact 17-8: Short-Term Increases in Offsite Emissions of Regional Criteria Pollutants and Precursors. Construction of a new haul road along either proposed alignment would result in PM₁₀ emissions in excess of the significance thresholds. Implementation of Mitigation Measures R17-8(a) through R17-8(c) would reduce fugitive dust impacts, but not to a less-than-significant level. As a result, this impact is considered *significant and unavoidable*.

Noise

Existing Conditions Along the Haul Route Alternative Alignments

Within Sheridan, noise-sensitive receptors located along the haul route alignments consist primarily of single-family residential units. Major noise-sensitive land uses located within Sheridan and near the alternate haul route alignments are shown in Exhibit 17-9.

Exhibit 17-9 Noise Survey and Sensitive Receptor Locations (Sheridan) - Haul Route Alternative
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Noise sources along the alternate haul route alignments and within Sheridan are associated primarily with vehicle traffic. Within Sheridan, vehicle traffic on SR 65 and haul truck traffic on Riosa Road are the primary sources of existing vehicle noise. Additional sources of noise within Sheridan include an occasional train pass-by and/or aircraft overflight.

Ambient noise surveys were conducted in 2001 for the purpose of documenting and measuring the existing noise environment at locations representative of the sensitive receptors. In August 2001, two long-term (24-hour) noise level measurements were conducted near the sensitive receptors (residences) located along the alternate haul route alignments (see Table 17-12). Exhibit 17-9 identifies the long-term ambient noise survey locations. Ambient hourly noise levels near the alternate haul route alignments (refer to monitoring site numbers 1 and 2, Exhibit 17-9), ranged from approximately 60 dBA L_{eq} (1-hour) during the daytime hours to approximately 41 dBA L_{eq} (1-hour) during the nighttime hours (see Appendix F). Average daily noise levels at these monitoring locations were approximately 60 dBA CNEL/ L_{dn} (Table 17-12). Ambient noise levels at both locations were primarily influenced by light-duty and medium-duty vehicle traffic on area roadways.

Table 17-12 Ambient Noise Survey Measurements						
Measurements in Sheridan Near the Haul Route Alternative Alignments						
Location ¹		Monitoring Time/Date and Duration	Noise Levels (dBA) ²			
Site #	Description		L_{eq} ³	L_{max}	L_{min}	CNEL/ L_{dn}
1	Southwest corner of Haul Route Alternative alignment 1 (E Street/entrance to waste water treatment plant intersection)	Start: noon/August 6, 2001 Stop: noon/August 7, 2001 Duration: 24 hours	61.4	93.1	36.2	60.3
2	South corner of Haul Route Alternative alignment 2/Ranch House Road intersection	Start: 2 p.m./August 8, 2001 Stop: 2 p.m./August 9, 2001 Duration: 24 hours	59.2	83.9	31.9	59.2
¹ Refer to Exhibit 17-9. ² Noise level measurements were recorded using a Larson Davis Model 820 Type 1 integrating sound level meter positioned approximately 4.5 feet above ground level. See Appendix F for description of plant operations occurring during periods of measurement. ³ For long-term 24-hour measurements this is the maximum 1-hour L_{eq} measured during the 24-hour period. Refer to Appendix F for ambient noise survey data. Source: EDAW 2004						

Existing roadway traffic noise levels were calculated for various roadway segments in Sheridan using the FHWA Traffic Noise Prediction Model (FHWA 1988). Input variables such as daily traffic volumes, traffic distribution characteristics, vehicle speeds, ground attenuation factors, and roadway widths were based on information from the traffic report prepared for this project, Caltrans, and model settings. Table 17-13 presents the modeled existing traffic noise levels 50 feet from the centerline of the nearest travel lane for roads in Sheridan.

Table 17-13 Existing Traffic Noise Levels	
Roadway Segment	L_{dn} /CNEL 50 Feet From Nearest Travel Lane Centerline (dB) ¹
Riosa Road West of Andressen Road Intersection (Downtown Sheridan)	64.29
SR 65 North of Riosa Road Intersection	74.62
SR 65 South of Riosa Road Intersection	74.55
SR 65 North of SR 193 Intersection	77.00
SR 65 South of SR 193 Intersection	76.69
¹ Existing traffic noise levels were calculated using the FHWA Traffic Noise Prediction Model Computer Program (FHWA 1988). Input variables such as daily traffic volumes, traffic distribution characteristics, vehicle speeds, ground attenuation factors, and roadway widths were based on information from the traffic report prepared for this project, Caltrans, and model settings. Traffic modeling results are presented in Appendix F. Source: DKS Associates 2004, EDAW 2004	

Impacts of the Haul Route Alternative

Impact
17-II

Short-term Construction Noise Levels Exceeding Permissible Limits under the Haul Route Alternative. Construction operations are not limited to the hours exempt from the permissible noise level limits set forth in the applicable noise standards (7 a.m.–7 p.m.), and construction noise could exceed permissible limits. Therefore, this impact is considered **potentially significant**.

This alternative involves the construction of an alternate haul road. The construction would likely include a site preparation phase that includes clearing, demolition, and excavation and subsequent finishing phases. According to EPA, the noise levels of concern are typically associated with the site preparation phase because of the construction equipment associated with clearing and excavation, which range in noise levels from 79 to 91 dBA at a distance of 50 feet as indicated previously in Table 17-14. The simultaneous operation of the construction equipment associated with the project, as identified above, would be projected to result in noise levels of approximately 92.8 dBA at 50 feet from the proposed construction sites. Assuming a noise attenuation rate of 6 dBA, the exterior noise levels at the single-family residential units located within approximately 2,175 feet of construction activities would be approximately 60 dBA without feasible noise control.

According to the Noise Element of the Placer County General construction activities are limited to the daytime hours between 7 a.m. and 7 p.m., Monday through Friday. Also, the Placer County Noise Ordinance exempts construction noise that occurs between the hours of 6 a.m. and 8 p.m. Monday through Friday, and between the hours of 8 a.m. and 8 p.m. Saturday and Sunday. Thus, construction operations that occur between 7 a.m. and 7 p.m. Monday through Friday are allowed and exempt from the applicable standards. However, if construction operations were to occur during the more noise-sensitive hours, which are between 7 p.m. and 7 a.m., the applicable noise standards would be exceeded.

at the single-family residential units within the project vicinity. In addition, if construction operations were to occur during these noise-sensitive hours, resultant increases in ambient noise levels, including noise generated by onsite equipment use and vehicles traveling on nearby roadways, may potentially exceed 5 dBA for brief periods of time, which may result in annoyance and/or sleep disruption for occupants of the nearby residential dwellings. Because construction operations are not limited to the daytime hours exempt from the permissible noise level limits set forth in the applicable noise standards, this impact is considered potentially significant.

**Table 17-14
Typical Equipment Noise Levels**

Type of Equipment	Noise Level in dBA at 50 feet	
	Without Noise Control	With Feasible Noise Control
Dozer or Tractor	80	75
Scraper	88	75
Front-End Loader	79	75
Backhoe	85	75
Grader	85	75
Truck	91	75
Feasible mitigation measures include use of exhaust and intake mufflers and engine shrouds, in accordance with manufacturers' specifications.		
Source: EPA 1971, FTA 1995		

**Impact
17-12**

Increase in Operational Highway Traffic Noise under the Haul Route Alternative.

*Predicted existing plus project traffic noise levels would result in reduced traffic noise levels along Riosa Road, but would increase noise levels along the Haul Route Alternative alignments in comparison to existing conditions along the alignments. This alternative would cause exceedance of Placer County's recommended thresholds at residences along the haul route alignments. This impact is considered **significant**.*

Table 17-15 describes existing and existing plus project predicted traffic noise levels under either of the Haul Route Alternative alignments on an average day for the AAPR. Existing plus project traffic noise levels were calculated using the FHWA Traffic Noise Prediction Model (TNM) (FHWA 1988). Input variables such as daily traffic volumes, traffic distribution characteristics, vehicle speeds, ground attenuation factors, and roadway widths were based on information from the traffic report prepared for this project, Caltrans, and model settings.

Predicted noise levels 50 feet from the near travel lane centerline of the alternate haul route alignments exceed 60 dBA L_{dn} (Table 17-15). Based on the comparison between existing and existing plus project traffic noise projections for the average day under the AAPR, this alternative would result in a net decrease in traffic noise levels along the existing haul route along Riosa Road and a net increase in traffic noise levels along alternate haul route alignments, and a (Table 17-15).

Table 17-15 Summary of Existing and Existing Plus Project Predicted Traffic Noise Levels					
Roadway Segment	Predicted Traffic Noise Levels and Contours: Average Annual Production Rate (Average Day)				
	CNEL 50 Feet From Near Travel Lane Centerline (dBA)			Distance (feet) from Roadway Centerline to 60 dBA (CNEL) Noise Contour	
	Existing	Existing plus Project	Net Difference	Existing	Existing plus Project
Alternate Haul Route Alignment	-	63.13	+63.13	-	90.2
Riosa Road West of Andressen Road Intersection (Downtown Sheridan)	64.29	51.07	-13.22	107.7	-
SR 65 North of Riosa Road Intersection	74.62	74.59	-0.03	525.3	522.8
SR 65 South of Riosa Road Intersection	74.55	74.33	-0.22	519.7	501.8
SR 65 North of SR 193 Intersection	77.00	76.88	-0.12	756.2	742.7
SR 65 South of SR 193 Intersection	76.69	76.56	-0.13	721.3	707.3
¹ Existing traffic noise levels were calculated using the FHWA Traffic Noise Prediction Model Computer Program (FHWA 1988). Input variables such as daily traffic volumes, traffic distribution characteristics, vehicle speeds, ground attenuation factors, and roadway widths were based on information from the traffic report prepared for this project, Caltrans, and model settings. Traffic modeling results are presented in Appendix F. Source: DKS Associates 2004, EDAW 2004					

Exhibits 17-10 and 17-11 show the predicted traffic noise contours within the town of Sheridan for the alternate haul route alignments. The noise contours were calculated using the federal TNM based on the predicted roadway traffic noise levels. TNM allows for the computation of the effects of variations in ground elevations, intervening natural and human-made features, and multiple reflections from various sources (e.g., buildings, soundwalls) using commonly applied acoustic propagation and attenuation methodologies, calibrated against field measurements. TNM is the most current model recommended by the FHWA for the prediction of traffic noise. Average daily traffic volumes were obtained from the traffic analysis prepared for this project. Vehicle distribution percentages were based on average vehicle distribution and heavy-duty truck distribution percentages obtained from Caltrans and the traffic report.

Based on the modeling conducted, as depicted in the corresponding exhibits and table, diverting project truck traffic from Riosa Road to one of the alternate haul route alignments would greatly reduce the predicted existing plus project traffic noise levels on Riosa Road (-13.22 dBA difference), and would reduce traffic noise levels on that road to a level below Placer County noise standards for the receptors along Riosa Road in Sheridan. However, predicted existing plus project traffic noise levels would result in an increase in noise levels along the alternate haul route alignments in comparison to existing

Exhibit 17-10 Predicted Traffic Noise Contours - Existing Plus Project with Alternative Haul Route
Alignment 1
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Exhibit 17-11 Predicted Traffic Noise Contours - Existing Plus Project with Alternate Haul Route
Alignment 2
Color 11x17

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conditions and would exceed the recommended thresholds at receptors along the Haul Route Alternative alignments. This is considered a significant impact.

Impact
17-13

Increases in Intermittent Single-Event Noise Levels under the Haul Route

Alternative. *The Haul Route Alternative would reduce SEL impacts along Riosa Road, but would increase SEL impacts along the Haul Route Alternative alignments in comparison to existing conditions along the alignments. As a result, this impact is considered **potentially significant**.*

In addition to increases in average daily traffic noise, as discussed in Impact 17-12, intermittent SELs and increases in the frequency of occurrence of such levels would be of additional concern, particularly during the more noise-sensitive evening and nighttime hours. Although the average daily noise descriptors (i.e., L_{dn} and CNEL) incorporate a nighttime weighting or “penalty” that is intended to reflect the expected increased sensitivity to annoyance at night, these descriptors do not necessarily protect people from sleep disturbance.

Truck-generated intermittent noise events are largely associated with brake squeal, and impact noise generated by the haul trailers when traveling over rough or uneven surfaces. Based on noise measurements of haul truck operations obtained from similar operations, intermittent haul truck noise levels, including brake squeal and trailer impact noise, typically range from approximately 85 to 95 dBA L_{max} at approximately 15 feet, for brief periods of time (EDAW 2002).

Intermittent SEL impacts would vary considerably depending on various factors, such as background noise levels, source type, and distance from source to receptor. Diverting project truck traffic from Riosa Road to one of the Haul Route Alternatives would reduce exposure to SELs at the sensitive receptors located along Riosa Road in Sheridan. However, truck traffic traveling on one of the Haul Route Alternative alignments would result in the exposure of sensitive receptors along the haul route to SELs that would not likely be noticeable under existing conditions, where project-generated truck traffic travels on Riosa Road. As a result, this impact is considered potentially significant.

Mitigation Measures

Mitigation measures are provided below for the *significant* and *potentially significant* impacts of the Haul Route Alternative.

Mitigation Measure R17-11: Implement Mitigation Measure R9-1. The applicant shall implement Mitigation Measure R9-1 for construction of a new haul road, Implement Measures to Reduce Short-Term Construction Noise Levels. This mitigation measure is described in Chapter 9, Noise.

Mitigation Measure R17-12: Operational Highway Traffic Noise Levels. To reduce the project's contribution to the existing plus project traffic noise levels to below 60 dBA CNEL/ L_{dn} at existing residences, a noise barrier (i.e., wall, berm, or combination of the two) would typically be required in front of the residences to attenuate the traffic noise associated with the Haul Route Alternative. For residences along alignment 1 a noise barrier would be a feasible choice for the reduction of noise levels.

Predicted traffic noise contours for existing plus project conditions with a noise barrier constructed along alignment 1 are shown in Exhibit 17-12.

- a. If Placer County decides to require construction of a new haul road, the design will also include a noise barrier of a minimum of 8 feet in height on the north side of alignment 1 from approximately 200 feet east of SR 65 to the intersection of the haul road with Ranch House Road. Final design and specifications for the proposed noise barrier will be developed in consultation with an acoustical engineer.

Additional mitigation measures typically used to mitigate traffic noise include use/application of noise attenuating materials to affected noise-sensitive structures. Such measures typically include increased wall insulation and installation of dual-glazed windows with laminated glass. If the windows must remain closed to obtain the desired noise reduction, then mechanical ventilation may also be required.

The predicted 60 dBA CNEL/ L_{dn} noise contour varies dependent on the segment analyzed and traffic volumes modeled. Based on these predicted distances to the 60 dBA CNEL/ L_{dn} noise contours and the number of affected noise-sensitive land uses that fall within the contour zone that would require improvements, implementation of this mitigation measure would not be economically feasible for Haul Route Alternative alignment 1. However, given the limited number of noise-sensitive land uses located along Haul Route Alternative alignment 2, implementation of this mitigation measure would be considered economically feasible for that alternative. As a result, the following mitigation measure would be required should alignment 2 be selected:

- b. If Placer County decides to require construction of alignment 2, it will implement structural noise mitigation for occupied residential dwellings located within the predicted 60 dBA CNEL/ L_{dn} traffic noise contour of this alignment. Under worst case conditions, the predicted 60dBA CNEL/ L_{dn} traffic noise contour would be a maximum of approximately 242 feet from the centerline of alignment 2. The specific measures to be implemented will be determined based on an acoustical mitigation investigation, which will be prepared by a qualified acoustical consultant with expertise in mitigating traffic noise impacts to noise-sensitive land uses. Mitigation measures will ensure that interior noise levels at affected land uses are reduced to an acceptable level of 45 dBA CNEL/ L_{dn} . Such measures typically include increased wall insulation and installation of dual-glazed windows with laminated glass. If the windows must remain closed to obtain the desired noise reduction, then mechanical ventilation will also be required.

Mitigation Measure R17-13: Implement Measures to Reduce Single-Event Noise Levels from Haul Route Alternative. The applicant shall implement Mitigation Measure R17-12, described above, to reduce SEL associated with a new haul road.

Exhibit 17-12 Predicted Traffic Noise Contours - Existing Plus Project With Alternate Haul Route
Alignment 1 (with Barrier)
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Level of Significance after Mitigation

Impact 17-11: Short-Term Construction Noise Levels Exceeding Permissible Limits under the Haul Route Alternative. Implementation of Mitigation Measure R9-1 would reduce potentially significant impacts associated with short-term construction noise to a *less-than-significant* level.

Impact 17-12: Operational Highway Traffic Noise Levels. With respect to Haul Route Alternative alignment 1, implementation of Mitigation Measure R17-12 would be anticipated to substantially reduce noise levels at existing residences located along alignment 1, as displayed in Exhibit 17-12. Average reductions would range from approximately 5 to 8 dBA, depending on various factors, including distance from the proposed haul route, as well as distance from SR 65. However, exterior noise levels at some nearby noise-sensitive land uses would still be anticipated to exceed the exterior noise standard of 60 dBA CNEL/ L_{dn} , specifically residences located just east of SR 65. With respect to alignment 2, implementation of Mitigation Measure R17-12 would be anticipated to reduce interior noise levels at affected residences located along alignment 2 to within normally acceptable levels. However, exterior noise levels at nearby noise-sensitive land uses would still be anticipated to exceed the exterior noise standard of 60 dBA CNEL/ L_{dn} . As a result, this impact is considered *significant and unavoidable*.

Impact 17-13: Intermittent Single Event Noise Levels. Implementation of Mitigation Measure R17-13, would reduce the loudness of single event noise levels associated with truck traffic on the alternative haul routes at nearby sensitive receptors. However, impulsive SEL associated with haul trucks along the alternative haul routes during the sensitive nighttime hours would still occur with the same frequency and potential cause sleep disruption. As a result, this impact would be *significant and unavoidable*.

Geology, Minerals, Soils, and Paleontological Resources

Paleontological Resources

Existing Conditions Along the Haul Route Alternative Alignments. A stratigraphic inventory and paleontological resource inventory were completed to develop a baseline paleontological resource inventory of the proposed Haul Route Alternative alignments and surrounding area by rock unit, and to assess the potential paleontological productivity of each rock unit. Research methods included a review of published and unpublished literature and a search for recorded fossil sites at the UC Berkeley Museum of Paleontology.

Stratigraphic Inventory. Geologic mapping at a scale of 1:250,000 (Wagner et al. 1987), 1:62,500 (Helley and Harwood 1985) and 1:24,000 (Helley 1979) indicates that both of the proposed Haul Route Alternative alignments are located on sediments of the lower member of the Riverbank Formation.

Bryan (1923) described the project site as an area where streams tributary to the Sacramento Valley have terraced valleys into the “Redlands.” He went on to describe these Redlands as the Southeastern

Division of Older Alluvium, of Pleistocene age. Gale et al. (1938) and Piper et al. (1939) were the first to publish detailed geologic maps in the Sacramento area, and designated the older alluvial Pleistocene deposits as the Victor Formation. However, in 1959, Davis and Hall proposed a subdivision of the Victor Formation into the Turlock Lake (oldest), Riverbank (middle), and Modesto (youngest) formations. The type section of the Riverbank was designated along the south bluff of the Stanislaus River within the City of Riverbank. Olmstead and Davis (1961) followed Bryan's classification scheme, and thus their paper on geologic features and ground-water storage in the Sacramento Valley refers to sediments in the project area as the Victor Formation. In 1981, Marchand and Allwardt proposed that the name Victor Formation be abandoned and that the Turlock Lake, Riverbank, and Modesto Formations be adopted as formal nomenclature for Quaternary deposits in the Sacramento and San Joaquin Valleys. Most later researchers have followed this recommendation.

The Riverbank Formation is of Pleistocene age (late Cenozoic), and while there is some disagreement among researchers as to its exact age, most place it between 150,000 and 450,000 years BP. [note to WP - the abbreviation "BP" is defined in Chapter 10; please add to acronyms and abbreviations page] The Riverbank forms alluvial terraces and fans, and consists of weathered reddish gravel, sand, and silt. In the Sacramento Valley, the Riverbank Formation tends to contain more mafic igneous rock fragments, as opposed to the San Joaquin Valley, and thus tends towards a stronger soil profile development. The upper and lower members of this formation are lithologically very similar, but the lower member is less widespread and more dissected. Deposits of the Riverbank Formation in the project area may mark the edge of the ancient Riverbank alluvial fan that was probably cut by a south-flowing ancient channel of the Bear River. (Helley and Harwood 1985.)

On the east side of the Sacramento Valley, the Riverbank is generally underlain by the Turlock Lake Formation.

Paleontological Resource Inventory. Mammalian fossils have been the most helpful in determining the relative age of alluvial fan sedimentary deposits (Louderback 1951; Savage 1951). The mammalian inhabitants of the late Pleistocene and Holocene alluvial fan and floodplain included horses, mastodons, camels, ground sloths, and pronghorns.

Surveys of Late Cenozoic land mammal fossils in the project region have been provided by Hay (1927), Stirton (1939), Savage (1951), and Jefferson (1991a, b). On the basis of his survey of vertebrate fauna from the non-marine Late Cenozoic deposits of the San Francisco Bay region, Savage (1951) concluded that two divisions of Pleistocene time could be recognized: he named the earlier Pleistocene fauna the Irvingtonian and the later Pleistocene fauna the Rancholabrean. The age of the later Pleistocene Rancholabrean fauna was based on the presence of bison and on the presence of many mammalian species which are inhabitants of the same area today. In addition to bison, larger land mammals identified as part of the Rancholabrean fauna include mammoths, mastodons, camels, horses, and ground sloths. These two fossil categories form the basis of Pleistocene fossil classification in northern California.

Remains of land mammals have been found at a number of localities in alluvial deposits referable to the Riverbank Formation. For example, all of the recorded fossil sites in Sacramento County occur in the

Riverbank. These seven localities have yielded over 50 Rancholabrean specimens including mammoth, ground sloth, camel, horse, antelope, bison, fish, woodrat, mole, gopher, squirrel, coyote, and snake (UCMP 2004; Hilton et al. 2000). Jefferson (1991a, b) compiled a database of California Late Pleistocene vertebrate fossils from published records, technical reports, unpublished manuscripts, information from colleagues, and inspection of museum paleontological collections at over 40 public and private institutions. He listed four individual sites in Placer County that have yielded Rancholabrean vertebrate fossils. These fossils would presumably all be referable to the Riverbank Formation. Olmsted and Davis (1961) noted several vertebrate fossils in the Victor Formation (some of which are now referable to the Riverbank Formation) from various localities in the Sacramento Valley. Marchand and Allwardt (1981) reported various unidentified bones and specimens of petrified wood in the Riverbank. Other vertebrate fossils recovered from the Riverbank Formation have been reported from Stanislaus and Fresno Counties (UCMP 2004).

Results of a paleontological records search at the UC Berkeley Museum of Paleontology indicate that the closest recorded vertebrate fossil site, the Lincoln Clay Pit, is approximately 6 miles southeast of the proposed Haul Route Alternative alignments. This locality, V67103, includes three specimens obtained from the late Miocene to mid Pliocene-age Mehrten Formation. While the Mehrten Formation is considered to be a paleontologically sensitive rock unit due to the number recorded fossils recovered therein, it is considerably older than the Riverbank, e.g., approximately 4,000,000–7,000,000 years BP.

Vertebrate fossils identified as Rancholabrean fauna from the (probable) Riverbank formation, found within 16 miles of the project site, include UCMP locality V69052 (remains of an American Mastodon) near Rocklin and the Sierra College Geology Department (Jefferson 1991b) discovery of *Equus* (horse) remains near Roseville.

The occurrence of previously recorded vertebrate fossil sites in the Riverbank Formation in the local and regional vicinity of the proposed project site suggests there is a potential for uncovering additional similar fossil remains during earth-moving activities related to construction of the proposed Haul Route Alternatives, which are underlain by sediments of the Riverbank Formation.

Existing Conditions Along the Haul Route Alternative Alignments

The Haul Route Alternative alignments are located within the alluvial valley of the Bear River (Exhibit 17-13). The regional setting for this area is described in Section 10.1 in Chapter 10, Geology, Minerals, and Soils. The margins of the Bear River alluvial plain and the Haul Route Alternative alignments are classified as MRZ-3a, where mineral deposits are known to occur but insufficient geologic data are available to determine the significance of these deposits.

Four distinct soil types have been mapped along the Haul Route Alternative alignments as shown in Exhibit 17-14: Redding and Corning gravelly loam, Xerofluents, Fiddymment-Kaseberg loams, and

Exhibit 17-13 Regional Geologic Map Showing Haul Route Alternative Alignments

Exhibit 17-14 Soils Map Showing Haul Route Alternative Alignments

San Joaquin–Cometa sandy loams. The Redding and Corning gravelly loam, and Xerofluents are described in Chapter 10. The Fiddymment-Kaseberg loams are approximately 50 percent Fiddymment soil and 30 percent Kaseberg soil. The Fiddymment soil is moderately deep and well-drained with very slow permeability over a hardpan. The Kaseberg soil is shallow and well-drained with moderate permeability over a hardpan. Surface runoff for both soils is slow to medium and the erosion hazard is slight to moderate. Under nonirrigated conditions, Fiddymment-Kaseberg loams have a Capability Class IV rating and a Storie index of 24. The San Joaquin–Cometa sandy loams are a claypan soil, moderately deep to deep and well-drained with very slow permeability. Surface runoff is slow and the erosion hazard is slight. Under irrigated and nonirrigated condition, this soil has a Capability Class IV rating and a Storie index of 34.

Impacts of the Haul Route Alternative

Impact
17-14

Soil Conditions Adverse to Haul Road Construction. *The surface soils within Haul Route Alternative alignments 1 and 2 may present adverse conditions. The low permeability of subsoil horizons and low strength of near surface soils present the potential for damage to pavement. Exposure of these soils during construction would increase the potential for erosion. This impact is considered **potentially significant**.*

The locations of the Haul Route Alternative alignments contain soils with characteristics that could present adverse conditions for roadway construction and maintenance. Specifically, each of the four soil mapping units crossed by Haul Route Alternative alignments have a low permeability clayey hardpan subsurface horizon. In general, the hardpan is encountered at depth of 2–3 feet below the ground surface. The soil above the hardpan is characterized as having low strength. The presence of the hardpan presents the potential for temporary saturation of the soil above the hardpan, a condition that would further reduce soil strength. This condition could compromise the performance and durability of the pavement. In addition, removal of vegetation during roadway construction could increase the potential for erosion and sedimentation. Whether alignment 1 or alignment 2 is selected, this impact is considered potentially significant.

Impact
17-15

Disturbance of Paleontological Resources During Haul Road Construction. *Although no previously recorded paleontological sites occur along the Haul Route Alternative alignments, unknown paleontological resources could occur in sediments of the Riverbank Formation that underlie the proposed Haul Route Alternative alignments. Therefore, construction activities could disturb unknown subsurface paleontological resources. This impact is considered **potentially significant**.*

Based on the record search conducted at the UC Berkeley Museum of Paleontology, there are no previously recorded fossil sites along the Haul Route Alternative alignments. However, both of the proposed alignments are located within sediments of the Riverbank Formation, which is a paleontologically sensitive rock unit under the Society of Vertebrate Paleontology guidelines (SVP 1995, 1996). Therefore, haul road construction activities could cause impacts to paleontological resources. This impact is considered potentially significant.

Mitigation Measures

A mitigation measure is provided below for the *potentially significant* impacts of the Haul Route Alternative.

Mitigation Measure R17-14: Prepare and Implement Appropriate Haul Road Design. Before haul road construction, the applicant shall implement the following mitigation measures:

- ▶ A haul road design will be approved by the Placer County Department of Public Works. The roadway design shall specifically address the potential presence of low strength soils and the potential for temporary saturation of soils above the subsurface hardpan. The design shall provide for adequate drainage of subsurface water.
- ▶ A SWPPP for roadway construction will be prepared. At a minimum, the plan shall conform with applicable best management practices presented the *California Storm Water Best Management Practice Handbook, Construction Activity*.

Mitigation Measure R17-15: Prepare and Implement Paleontological Mitigation and Monitoring Plan. Prior to haul road construction, the applicant shall implement the following mitigation measures:

- ▶ *Paleontological Mitigation Plan*-Prior to the start of construction, a qualified paleontologist shall be retained to design a paleontological resource mitigation and monitoring program and to implement said program during earth-moving activities. The mitigation and monitoring program shall include the following:
 - Preconstruction coordination
 - Construction monitoring procedures
 - Procedures to be followed if a paleontological resource is discovered during haul road construction
 - Sampling and data recovery procedures (if necessary)
 - Museum storage coordination for any specimen and data recovered
 - Report of findings
- ▶ *Field Survey*-Prior to the start of construction, the paleontologist shall conduct a field survey of exposures of sensitive stratigraphic units within the construction area that will be disturbed.
- ▶ *Construction Personnel Education*-Prior to the start of construction activities, construction personnel involved with earth-moving activities will be informed of the possibility of encountering fossils, the appearance of fossils and the types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This worker training will be prepared and presented by a qualified paleontologist.

- ▶ *Paleontological Monitoring*-The paleontologist shall monitor earth-moving construction activities where this activity will disturb previously undisturbed sediment. Monitoring will not take place in areas underlain by artificial fill, or in areas where exposed sediment will be buried but not otherwise disturbed.
- ▶ *Construction Personnel Education*-Prior to the start of construction activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering fossils, how to identify fossils, and proper notification procedures. This worker training shall be prepared and presented by a qualified paleontologist.

Level of Significance after Mitigation

Following implementation of the above mitigation measures, all potential impacts related to geology, minerals, soils, and paleontological resources would be reduced to a *less-than-significant* level.

Water Resources

Existing Conditions Along the Haul Route Alternative Alignments

The Haul Route Alternative alignments pass through gently rolling topography east and south of Sheridan. Drainage in this area generally flows in a southwest direction toward Yankee Slough, a tributary of the Bear River. No natural surface water or drainages are located along the Haul Route Alternative alignments. Drainage in this area generally disperses via overland flow. A drainage ditch has been constructed within the Placer County E Street right-of-way in the alignment of Haul Route Alternative Alignment 1.

Neither of the Haul Route Alternative alignments in the vicinity of Sheridan is located within a 100-year flood hazard zone.

Impacts of the Haul Route Alternative

Impact
17-16

Increased Offsite Flooding Hazards. *If a new haul road were to impede existing drainage patterns, it could cause localized flooding. This impact is considered **potentially significant**.*

No natural surface water or drainages are located along the Haul Route Alternative alignments. Drainage in this area generally disperses via overland flow. If a new haul road were to impede existing drainage patterns, it could cause localized flooding. A drainage ditch is located within the Placer County E Street right-of-way, within the alignment of Haul Route Alternative alignment 1. If this route were selected, the haul road would displace the drainage ditch and could result in localized flooding. This impact is considered potentially significant.

Mitigation Measures

A mitigation measure is provided below for the *potentially significant* impact of the Haul Route Alternative.

Mitigation Measure R17-16: Implement Offsite Flood Control. All new on-highway haul roads shall be constructed in a manner that minimizes property and safety hazards related to localized flooding.

Level of Significance after Mitigation

Following implementation of the above mitigation measure, all potential impacts related to water resources would be reduced to a *less-than-significant* level.

Biological Resources

Existing Conditions Along the Haul Route Alternative Alignments

Biological resources surveys conducted for the proposed project are described in Chapter 12, Biological Resources. In addition to these surveys, the biological resources along the two Haul Route Alternative alignments were assessed during a reconnaissance-level survey conducted by EDAW biologists in July 2001. Vegetation in the vicinity of the two alternate haul route alignments includes disturbed weedy areas and grasslands. A drainage ditch flows through the E Street right-of-way. Some of these areas are actively plowed and some have been used as grazing land for livestock.

Impacts of the Haul Route Alternative

Impact
17-17

Loss of Nesting Habitat for Raptors as a Result of Haul Road Construction. Active raptor nests could be affected by the removal of large trees and nearby haul road construction activity during the breeding season (February 1–August 31). This impact is considered *potentially significant*.

Haul road construction could result in the loss or disturbance of active raptor nests, which are protected under the California Fish and Game Code. Large trees in the vicinity of the Haul Route Alternative alignments being considered under this alternative could be used for nesting by Swainson's hawk, Cooper's hawk, red-tailed hawk, red-shouldered hawk, great horned owl, and white-tailed kite. In addition to the potential for direct removal, noise, vibration, and other disturbance resulting from haul road construction, activities could affect the success of active nests. This impact is considered potentially significant.

Mitigation Measures

A mitigation measure is provided below for the *potentially significant* impact of the Haul Route Alternative.

Mitigation Measure R17-17: Implement Restrictions to Protect Raptor Nests in Haul Road Construction Area. The applicant shall implement the following mitigation measures to reduce impacts on nesting raptors in the haul road construction area:

- ▶ Before tree removal and grading in the haul road construction area, a determination shall be made as to whether grading or tree removal is proposed during the raptor nesting season (February 1–August 31). If no grading or tree removal is scheduled to occur during the raptor nesting season, no further mitigation shall be necessary.
- ▶ If grading or tree removal is proposed during raptor nesting season, a focused survey for raptor nests shall be conducted by a qualified biologist during the nesting season to identify active nests within the haul road construction area. The survey shall be conducted no fewer than 14 days, and no more than 30 days, before the beginning of grading or tree removal. The results of the survey shall be summarized in a written report to be submitted to CDFG before the beginning of grading.
- ▶ If nesting raptors are found during the focused survey, no grading or tree removal shall occur within 500 feet of an active nest until the young have fledged (as determined by a qualified biologist), or until Placer County receives written authorization from CDFG to proceed. If nest trees are unavoidable, they shall be removed during the nonbreeding season when the nests are inactive.

Level of Significance after Mitigation

Following implementation of the above mitigation measure, all potential impacts related to biological resources would be reduced to a *less-than-significant* level.

Public Health and Safety

Impacts on public health and safety under the Haul Route Alternative would be similar to those under the proposed project. No new impacts would result from construction of a new haul road.

Hazardous Materials

Existing Conditions Along the Haul Route Alternative Alignments

The specific land uses within Haul Route Alternative alignments 1 and 2 are described in the Land Use section above. The vicinity of both Haul Route Alternative alignments is dominated by pastureland; agricultural land with residences; and the town of Sheridan with residential, commercial, and quasi-public/public land uses including churches and a school. The northern (common) section of Haul Route Alternative alignments 1 and 2 is characterized by pastureland with a few nearby residences. The southern portion of Haul Route Alternative alignment 1 would pass by medium density residential land uses to the northwest, and the Placer County wastewater treatment ponds and irrigation fields to the southeast, and would intersect with SR 65 adjacent to an auto parts store and garage (Exhibit 17-4). The southern section of Haul Route Alternative alignment 2 is characterized by the Placer County

wastewater treatment ponds and fields to the northwest, and a residence and pastureland to the southeast (Exhibit 17-4). A drainage ditch currently flows within the E Street right-of-way.

Impacts of the Haul Route Alternative

Impact
17-18

Accidental Releases of Hazardous Materials During Haul Road Construction. *Spills or other accidental releases of fuels, lubricants, and/or other hazardous materials used for haul road construction could adversely affect soil, groundwater quality, and the health and safety of workers. This impact is considered **potentially significant**.*

Haul road construction activities would include the use of hazardous materials. Spills or other accidental releases of fuels, lubricants, and/or other hazardous materials used for haul road construction could adversely affect soil, groundwater quality, and the health and safety of workers. This impact is considered potentially significant.

Mitigation Measures

A mitigation measure is provided below for the *potentially significant* impact of the Haul Route Alternative.

Mitigation Measure R17-18: Prepare Storm Water Pollution Prevention Plan for Haul Road Construction. The applicant shall prepare a SWPPP before construction of a new haul road. The SWPPP shall include measures to protect surface water and groundwater quality from spillage of fuels, lubricants, solvents, or other hazardous materials during construction of the haul road. At a minimum, the plan shall conform with applicable BMPs presented in the *California Storm Water Best Management Practice Handbook, Construction Activity*.

Level of Significance after Mitigation

Following implementation of the above mitigation measure, all potential impacts related to hazardous materials would be reduced to a *less-than-significant* level.

Cultural Resources

Existing Conditions Along the Haul Route Alternative Alignments

A records search for the vicinity of the Haul Route Alternative alignments was conducted by the NCIC at California State University, Sacramento, on June 15, 2001. This search is described in Section 15.1 of Chapter 15, Cultural Resources. None of the historic resources found are located along the Haul Route Alternative alignments (Peak & Associates 2001).

In August 2001, Peak & Associates conducted field surveys of portions of the Haul Route Alternative alignments that are owned by Placer County. Peak & Associates conducted visual inspections of the privately owned portions of the Haul Route Alternative alignments from public rights-of-way and from property owned by Placer County. No cultural resources were discovered (Peak & Associates 2001).

Impacts of the Haul Route Alternative

Impact 17-19

Disturbance of Surface Cultural Resources During Haul Road Construction. *No known archaeological or historic sites occur along the Haul Route Alternative alignments, based on the records and literature search conducted by the NCIC and field surveys conducted by Peak & Associates (2001). Because field surveys were not able to be conducted for all portions of the Haul Route Alternative alignments, unknown surface cultural resources could occur within the unsurveyed portions of the Haul Route Alternative alignments. Therefore, haul road construction activities could disturb unknown surface cultural resources. This impact is considered **potentially significant**.*

Based on the records and literature search conducted by the NCIC, no evidence of significant prehistoric or historic resources was found along the Haul Route Alternative alignments. No resources listed on or eligible for listing in the NRHP or the CRHR are known along the Haul Route Alternative alignments. Several sections of the current UPRR, located approximately 150 feet west of the Haul Route Alternative alignments, have been recorded as the historic California Central Railroad route (Peak & Associates 2001).

As described above, field surveys were conducted within portions of the Haul Route Alternative alignments. There appear to be no historic structures along the Haul Route Alternative alignments, based on the field survey and visual inspections of the Haul Route Alternative alignments (Peak & Associates 2001). Peak & Associates concluded that because of the lack of proximity to natural water supplies, there is a relatively small chance that archaeological resources occur along the Haul Route Alternative alignments (Peak & Associates 2001). Because field surveys were not able to be conducted for all portions of the Haul Route Alternative alignments, unknown surface cultural resources could occur within the unsurveyed portions of the Haul Route Alternative alignments. Therefore, haul road construction activities could disturb previously unknown surface cultural resources. This impact is considered potentially significant.

Impact 17-20

Disturbance of Subsurface Cultural Resources During Haul Road Construction. *No cultural resources are known to exist along the Haul Route Alternative alignments, based on the records and literature search conducted by the NCIC and field surveys conducted by Peak & Associates (2001). However, haul road construction activities could result in the disturbance of previously unknown subsurface cultural resources. Therefore, this impact is considered **potentially significant**.*

Based on the records and literature search conducted by the NCIC, as well as field surveys and observations, no evidence of significant cultural resources was found along the Haul Route Alternative alignments, as described above (Peak & Associates 2001). Although the literature review and field visits found no evidence of cultural resources along the Haul Route Alternative alignments, previously undiscovered subsurface cultural resources could be unearthed during haul road construction activities. Therefore, such activities could disturb previously unknown subsurface cultural resources. This impact is considered potentially significant.

Mitigation Measures

Mitigation measures are provided below for the *potentially significant* impacts of the Haul Route Alternative.

Mitigation Measure R17-19: Conduct Preconstruction Survey of the Haul Route. The applicant shall conduct preconstruction pedestrian cultural resource surveys of the haul route selected for construction to supplement the cultural resource investigations already conducted for these areas. Should any cultural resources be found during these surveys, the applicant shall comply with standard procedures for evaluating the significance of resources, discovery of human remains and mitigation measures for historic resources or unique prehistoric archaeological sites as prescribed in State CEQA Guidelines §15064.5(f) and §15126.4(b).

Mitigation Measure R17-20: Protect Previously Unknown Cultural Resources. The applicant shall implement the following measures to reduce project impacts on subsurface cultural resources:

- ▶ In the event that previously unknown archaeological resources are discovered during any land alteration activities, the construction crew shall immediately cease work in the immediate area. A qualified archaeologist approved by Placer County shall be consulted to evaluate the resource in accordance with state and federal guidelines. Mitigation measures consistent with State CEQA Guidelines §21083.2 shall be devised and a mitigation plan shall be submitted to Placer County for approval. All archaeological excavation and monitoring activities shall be conducted in accordance with prevailing professional standards as outlined in State CEQA Guidelines §21083.2. Mitigation, in accordance with a plan approved by Placer County, shall be implemented before commencement of work within the area of the resource find.
- ▶ In the event that human remains are discovered, the Placer County Coroner shall be contacted in accordance with California Health and Safety Code §7050.5. As cited in State CEQA Guidelines §15064.5, if the coroner determines that remains represent Native American interment, the Native NAHC in Sacramento shall be consulted to identify the most likely descendants and the appropriate disposition of the remains. Consultation with descendants shall occur as directed by the NAHC.

Level of Significance after Mitigation

Following implementation of the above mitigation measure, all potential impacts related to cultural resources would be reduced to a *less-than-significant* level.

Cumulative Impacts

Projects considered in the cumulative impact analysis for the Haul Route Alternative are identical to those considered for the proposed project (see Chapter 16, Cumulative Impact Analysis).

Cumulative Impacts of the Haul Route Alternative

Impact
17-21

Cumulative Adverse Impacts on Visual Resources. Long-term visual impacts of the new haul road would be less than significant because the road would appear within the overall context of the existing visual character of the area. Construction-related lighting for the new haul road would have a potentially significant impact on adjacent residents. This impact, however, would be site-specific and would not contribute considerably to a significant cumulative impact. This cumulative impact is considered **less than significant**.

Views of the haul road during construction would involve heavy machinery, construction materials, and excavated soil; however, construction activities would be temporary and no scenic vistas or highways would be affected. Long-term visual impacts of the new haul road (Impact 17-3) would be less than significant because the road would appear within the overall context of the existing visual character of the area. These visual impacts are site specific and would not contribute to any cumulative impact.

Construction-related lighting for the new haul road would have a potentially significant impact on adjacent residents (Impact 17-4) because the alternative haul routes are located directly adjacent to residences. This impact, however, would be site-specific and would not contribute considerably to a significant cumulative impact. This cumulative impact is considered less than significant.

Impact
17-22

Potential Cumulative Change in Levels of Service in Sheridan. Cumulative projects would contribute traffic on SR 65, but the construction of a new haul road would improve LOS over existing conditions. This impact is considered **less than significant**.

Construction of a new haul road would divert some traffic in Sheridan, improving LOS at key intersections (Impact 17-5). In the long term, traffic conditions in Sheridan would improve because of Caltrans' proposed SR 65 Lincoln Bypass project (Impact 17-6). Cumulative projects would contribute traffic on SR 65, but the construction of a new haul road would improve LOS over existing conditions. This cumulative impact is considered less than significant.

Impact
17-23

Cumulative Air Quality Impacts. *Haul road construction and cumulative projects would combine to increase emission levels of ozone precursors and particulate matter, thereby exacerbating the existing exceedances of state and federal ambient air quality standards for ozone precursors and state standards for particulate matter. This cumulative impact is considered **significant**.*

Construction of either of the proposed haul roads, combined with cumulative projects, would cause increases in regional criteria pollutants and precursors (ROG, NO_x, and PM₁₀) (Impact 17-8). Short-term emissions would result from haul road construction. The area already exceeds state and federal ambient air quality standards for ozone precursors and state standards for particulate matter. Therefore, this cumulative impact is considered significant.

Impact
17-24

Cumulative Noise Impacts. *The project would not increase the volume of truck traffic within Sheridan compared to baseline conditions. Therefore, the operation of a new haul road would not contribute considerably to a significant cumulative traffic noise impact regardless of which haul route is selected. Noise generated during construction of a new haul road, however, could contribute considerably to a short-term significant cumulative noise impact. Therefore, this cumulative impact is considered **potentially significant**.*

As discussed in Chapter 7, Traffic, and Chapter 9, Noise, the proposed project would result in a decrease in annual average daily haul truck trips, in comparison to baseline conditions. Therefore, because the project would not increase the volume of truck traffic within Sheridan compared to baseline conditions, the operation of a new haul road would not contribute considerably to a significant cumulative traffic noise impact regardless of which haul route is selected.

Noise resulting from construction of a new haul road, however, could exceed the permissible noise standards if construction activities were not limited to 7 a.m. to 7 p.m. as required in the standards, resulting in a potentially significant short-term cumulative impact.

Impact
17-25

Cumulative Soil Conditions Adverse to Haul Road Construction. *The surface soils within Haul Route Alternative alignments 1 and 2 may present adverse conditions. The low permeability of subsoil horizons and low strength of near surface soils present the potential for damage to pavement. Exposure of these soils during construction would increase the potential for erosion. However, this is a site-specific impact that would be mitigated to a less-than-significant level. Therefore, this cumulative impact is considered **less than significant**.*

As described in Impact 17-14, the surface soils within Haul Route Alternative alignments 1 and 2 may present adverse conditions. Low permeability of subsoil horizons and low strength of near-surface soils present the potential for damage to pavement, and exposure of these soils would increase the potential for erosion. While this impact is considered potentially significant, it is a site-specific impact and would not combine with other related projects to result in a cumulative impact. This site-specific impact would be mitigated to a less-than-significant level. Therefore, this impact is considered less than significant.

Impact
17-26

Cumulative Disturbance of Subsurface Cultural Resources. No cultural resources are known to exist along the Haul Route Alternative alignments. However, haul road construction activities and several cumulative projects could result in the disturbance of previously unknown subsurface cultural resources. This impact is considered **potentially significant**.

No evidence of significant prehistoric or historic resources was found along the Haul Route Alternative alignments (see Cultural Resources section above). All portions of the Haul Route Alternative alignments were not surveyed, however, leaving the possibility that cultural resources could be present in those areas. Several of the cumulative projects (Teichert Aggregate Placer County facility, Lakeview Farms Hunt Club, Plumas Lake Specific Plan development) involve or would involve construction activities that could result in disturbance of previously unknown surface or subsurface cultural resources. These resources could be found to be “unique” under CEQA §21083.2. Therefore, this impact is considered potentially significant.

Mitigation Measures

No mitigation measures are necessary for the following *less-than-significant* cumulative impacts of the Haul Route Alternative.

- 17-21: Cumulative Adverse Impacts on Visual Resources
- 17-22: Potential Cumulative Change in Levels of Service in Sheridan
- 17-25: Cumulative Soil Conditions Adverse to Haul Road Construction

Mitigation measures are provided below for the *potentially significant* cumulative impacts of the Haul Route Alternative.

Cumulative Mitigation Measure R17-23: Implement Mitigation Measures R17-8(a) through R17-8(c). The applicant shall implement Mitigation Measures R17-8(a) through R17-8(c). These mitigation measures are described in the Air Quality section above.

Cumulative Mitigation Measure R17-24: Implement Mitigation Measure R17-11. The applicant shall implement Mitigation Measure R17-11 to reduce short-term construction noise levels. This mitigation measure is described in the Noise Section above.

Cumulative Mitigation Measure R17-26: Implement Mitigation Measures R17-19 and R17-20. The applicant shall implement Mitigation Measures R17-19 and R17-20 to reduce impacts of haul road construction on cultural resources. These mitigation measures are described in the Cultural Resources section above.

Level of Significance after Mitigation

Following implementation of cumulative Mitigation Measures R17-24 and R17-26, the associated impacts would be reduced to a *less-than-significant* level. The following cumulative impact, however, cannot be feasibly mitigated to a less-than-significant level, and would remain *significant and unavoidable*.

Impact 17-23: Cumulative Air Quality Impacts. If impacts of cumulative projects (in particular, the Teichert Aggregate facility, the SR 65 Lincoln Bypass project, and development in the Plumas Lake Specific Plan area of Yuba County) relating to regional criteria pollutants are not mitigated on a site-specific basis to a less-than-significant level, then a *significant and unavoidable* cumulative impact would exist and construction of a new haul road would contribute to that impact.

CONCLUSIONS

The Haul Route Alternative would only be adopted as an additional element of the proposed project in the event that the proposed mine expansion project described in Chapter 2 is approved. This alternative, therefore, would result in the same impacts at the project site (i.e., the existing mine site and proposed expansion area) as would the proposed project (see Chapters 4–16).

Many environmental effects unique to this alternative would be related to construction of a half-mile of new road. Construction-related effects include pollutant emissions and noise generated by construction equipment, disturbance of unknown cultural resources, effects on nearby raptor nests, nighttime construction lighting, short-term views of construction activities, and release of hazardous materials during construction. All construction-related environmental effects would be short-term. All construction-related effects would also be mitigable to a less-than-significant level except the short-term air quality impacts, which would be similar to the short-term air quality impacts generated by construction of the proposed asphalt batch plant at the mine site.

Other environmental effects unique to this alternative would be related to operation of a new haul road. A new haul road could result in significant but mitigable impacts related to localized flooding and soil conditions. Because a new haul road would divert trucks and other nonproject traffic around downtown Sheridan, it would reduce traffic volumes at downtown Sheridan intersections including Riosa Road/SR 65 and Riosa Road/11th Street.

Diverting haul trucks and other traffic along a new haul road would reduce traffic noise levels along Riosa Road (i.e., the existing haul road), but would increase noise levels along the Haul Route Alternative alignments in comparison to existing conditions along the alignments. This alternative would cause exceedance of Placer County's recommended thresholds at residences along the haul route alignments, resulting in a significant and unavoidable noise impact that would not occur if a new haul road were not constructed. Because fewer residences would be located near the Haul Route Alternative alignments than are located along Riosa Road in downtown Sheridan, this alternative would reduce health risk impacts related to haul truck traffic. Unlike the proposed project, this alternative would not result in a significant impact related to diesel exhaust health risk, and would, therefore, reduce this significant and unavoidable

project impact to a less-than-significant level. Because fewer residences are located along alignment 2 than alignment 1, alignment 2 would be environmentally superior to alignment 1.

As previously discussed, State CEQA Guidelines §15126.6(a) requires an evaluation of “a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives...” *[emphasis added]*. Some portions of the Haul Route Alternative alignments cross private land, whereas other portions pass through Placer County right-of-way and other Placer County land. The feasibility of this alternative would depend upon the ability of Placer County to acquire the private lands within the chosen alignment.

The feasibility of alignment 2 might also depend upon the plans of the Placer County Department of Facility Services to construct an additional treated effluent storage pond and irrigation spray field within a portion of alignment 2, southeast of their existing ponds and south of their existing spray fields on parcel 019-250-006 (Wood, pers. comm., 2004). The Placer County Planning Department is currently coordinating with the Placer County Department of Facility Services about their plans to gauge the level of feasibility of Haul Route Alternative alignment 2.

NO ASPHALT BATCH PLANT ALTERNATIVE

DESCRIPTION

The No Asphalt Batch Plant Alternative has been developed to reduce potential impacts related to the generation of air pollutants associated with the operation of the asphalt batch plant. All aspects of this alternative would be similar to the proposed project, except that the asphalt batch plant would not be constructed or operated. This alternative would involve the mining and processing of sand and gravel deposits on up to 365 acres of the approximately 448-acre proposed expansion area and proposed additions and revisions to the current mine reclamation plan. Mining would be conducted in the proposed expansion area using open pit, continuous excavation methods currently being used at the existing operation. Mined materials would be processed using methods and facilities already present in the processing area, including the crusher plant, wash plant #1, the sand classifier, and wash plant #2. As with the proposed project (see Chapter 2), the AAPR would decrease from 1.5 mty to 1.25 mty and the MAPR would remain at 1.82 mty.

After the completion of mining operations, the entire project site, including the proposed expansion area, would be fully reclaimed to a variety of wildlife habitat and agricultural uses as described in the draft mine reclamation plan and the addendum. These end uses would include the creation of open-water pond habitat, oak woodland, riparian and wetland habitats, an elderberry mitigation area, walnut orchards, and rice fields.

ENVIRONMENTAL ANALYSIS

Land Use/Agriculture

As with the proposed project, this alternative would result in phased conversion of approximately 254 acres of state-designated and federally designated Farmland, and would reclaim 254 acres of land to

agricultural land that might not demonstrate the characteristics required for state or federal designation. This alternative therefore would result in similar impacts related to farmland conversion.

Because this alternative would not include the asphalt batch plant, it would result in decreased emissions of air pollutants when compared to the proposed project. This decrease, however, is not expected to reduce overall air pollution impacts to a less-than-significant level. Similarly, this decrease of emissions would reduce land use compatibility impacts related to emissions, but would not be expected to reduce them to a less-than-significant level. This alternative therefore would result in similar but decreased land use compatibility impacts as compared to the proposed project. Land use compatibility impact under this alternative, however, would not be substantially reduced below those associated with the proposed project.

Visual Resources

This alternative would be substantially similar to the proposed project, and would result in similar but slightly reduced less-than-significant visual impacts related to construction and operation of the asphalt batch plant.

Public Services

The No Asphalt Batch Plant Alternative would result in impacts on public services similar to impacts of the proposed mine expansion project. Because the same intensity and scope of land uses (i.e., mining and processing of approximately 54 mty of sand and gravel deposits) would be developed with this alternative, demand for law enforcement, fire protection, and emergency response services would be similar to those associated with the proposed mine expansion project. For the same reasons, wastewater and solid waste generation would be expected to be similar. In addition, overall onsite water usage with this alternative would, as with the proposed mine expansion project, be less than significant because no new facilities or uses are proposed that would result in additional requirements for water (refer to Section 1.4 in Chapter 1, Introduction). Therefore, the implementation of this alternative would result in impacts on public services similar to those of the proposed mine expansion project.

Traffic

Because the mining and processing rates would be similar to the proposed project, the daily and yearly offsite truck traffic generated by the proposed mine expansion project would be approximately the same as under the proposed project. Eliminating the asphalt batch plant would result in a slight decrease in delivery truck traffic to the project site needed for shipment of liquid asphalt (approximately 1,500 truck trips per year), and would result in a minor decrease in employee trips (the workforce would be reduced by three employees) compared to the proposed expansion project. The number of annual truck trips would be reduced as a result of a reduction in average annual yield from the existing level of 1.5 mty to 1.25 mty, as under the proposed project. Therefore, less-than-significant traffic impacts related to LOS in Sheridan would be similar to those under the proposed project.

Air Quality

The No Asphalt Batch Plant Alternative would generate mining, reclamation, and hauling emissions similar to those generated by the proposed project. Minor decreases would be attributable to the hauling of processed material to the asphalt batch plant (not needed under this alternative), and a marginal decrease in mine-related traffic because delivery of asphaltic oil would not be needed. Construction emissions generated by asphalt batch plant construction would also not occur under this alternative. More importantly, the proposed asphalt batch plant would be a substantial source of ROG, PM₁₀, SO_x, NO_x, and CO emissions. The No Asphalt Batch Plant alternative, therefore, would substantially reduce emissions of these pollutants. This alternative would also eliminate odors generated by the proposed plant. Therefore, the implementation of this alternative would result in a decrease in overall air quality impacts compared to the proposed mine expansion project.

Noise

Because this alternative would not include construction or operation of the asphalt batch plant, it would result in reduced noise impacts compared to the proposed project, particularly during the more sensitive nighttime hours. The EIR includes mitigation measures to reduce project-related impacts from the operation of onsite stationary equipment, including the asphalt batch plant, to a less-than-significant level. Elimination of the asphalt batch plant, therefore, would not be needed to reduce this impact to a less-than-significant level. The No Asphalt Batch Plant Alternative would also eliminate the need for liquid asphalt delivery trucks to the plant (estimated at two deliveries per day). Because deliveries would occur primarily during the daytime hours, however, any resultant noise decrease from the elimination of liquid asphalt delivery trucks would not be noticeably different from the proposed project. To summarize, implementation of this alternative would result in a decrease in overall noise generated by the project, but would not reduce any significant and unavoidable noise-related impacts to a less-than-significant level.

Geology, Minerals, Soils, and Paleontological Resources

Although this alternative would preclude the placement and operation of the asphalt batch plant, it would incorporate the same mining and processing rates and locations as the proposed mine expansion project and would therefore result in the same amount of mine-related disturbance. This alternative would eliminate the potentially significant but mitigable impact relating to asphalt batch plant construction on potentially unstable fill material (i.e., a filled settling basin).

Water Resources

Implementation of the No Asphalt Batch Plant Alternative would result in impacts on water resources similar to impacts of the proposed mine expansion project. Eliminating the asphalt batch plant from the project would slightly reduce the amount of impervious surfaces added to the project site and thus slightly reduce the amount of runoff generated by the project. Increases in runoff storage as part of the proposed mine expansion project would more than compensate for the additional runoff generated by impervious surfaces at the asphalt batch plant, however, and this impact was found to be less than significant for the proposed project (Impact 11-3). Therefore, the No Asphalt Batch Plant Alternative would have an impact relating to flooding hazard similar to that of the proposed project.

This alternative would not result in significant but mitigable impacts related to potential sediment loading during construction of the asphalt batch plant. All other potential water quality impacts would remain the same under this alternative. Therefore, impacts on water resources associated with the No Asphalt Batch Plant Alternative would be substantially similar to those for the proposed mine expansion project.

Biological Resources

The No Asphalt Batch Plant Alternative would result in the same amount of surface disturbance as would the proposed mine expansion project, resulting in similar impacts on biological resources, including impacts on plant communities considered sensitive by CDFG. As with the proposed mine expansion project, this alternative would disturb an additional 365 acres of the approximate 448-acre proposed expansion area. The preclusion of the asphalt batch plant would not reduce any impacts on biological resources because the asphalt batch plant would be placed and operated on a previously disturbed portion of the Patterson mine site adjacent to the existing processing area. Therefore, the No Asphalt Batch Plant Alternative would result in impacts on biological resources similar to impacts of the proposed mine expansion project.

Public Health and Safety

No public health or safety impacts were identified for the proposed project that would result from construction or operation of the plant. Construction of the asphalt batch plant, however, would involve filling of the existing settling basin, eliminating a potential mosquito breeding area. Mosquito hazards were identified as a less-than-significant impact resulting from the proposed project.

Hazardous Materials

Similar to the proposed project, the potential presence of residual levels of agricultural chemicals in soils in the proposed mining expansion areas under this alternative would be significant but mitigable. Construction of the asphalt batch plant under the proposed project would involve fueling and maintenance activities that could result in spillage of fuels, lubricants, solvents, or other hazardous materials and could result in adverse effects on soil and groundwater quality and affect the health and safety of workers. This impact of the proposed project was identified as potentially significant, but mitigable.

Cultural Resources

Implementation of the No Asphalt Batch Plant Alternative would result in impacts similar to those of the proposed mine expansion project. The plant would be located in a previously disturbed (i.e., excavated) area of the mine site with a very low likelihood for unknown subsurface cultural resources. This alternative, therefore, would not substantially reduce the likelihood of potential project impacts on unknown subsurface cultural resources.

CONCLUSIONS

Overall, the No Asphalt Batch Plant Alternative would result in substantially similar, but reduced, impacts compared to those associated with the proposed project. This alternative would not fill the settling ponds for construction of the asphalt batch plant, a possible mosquito-breeding area. This alternative would also reduce certain impacts related to land use compatibility; visual resources; public services; noise; air quality; geology, minerals, and soils; public health and safety; and hazardous materials, but would not reduce any significant and unavoidable impacts to a less-than-significant level. Additionally, this alternative would not meet the basic project objectives of allowing for the development of a sufficient supply of asphalt to meet the future needs of society and creating new job opportunities associated with the operation of the asphalt batch plant.

REDUCED ACREAGE ALTERNATIVE

DESCRIPTION

The Reduced Acreage Alternative has been developed to analyze a project design that would minimize noise impacts on nearby residences. This alternative would be substantially similar to the proposed project, but would not include mining and reclamation of Phase 6. On-highway haul trucks would continue to use the existing haul route to access the mine. This alternative, therefore, essentially evaluates the proposed project without mining Phase 6.

The Reduced Acreage Alternative would result in about 2 fewer years of mining and production than the proposed project, but final site reclamation would occur around the same time as the proposed project (See Exhibit 2-9). Similar to the proposed project, mining of Phases 2–5 would be conducted using open pit, continuous excavation methods currently being used at the existing operation. Mined materials would be processed using methods and facilities already present in the processing area, including the crusher plant, the two wash plants, and sand classifier. This alternative would include construction and operation of an asphalt batch plant, similar to the proposed project. As with the proposed project, the AAPR would decrease from 1.5 million tons per year to 1.25 million tons per year, and the MAPR would remain at 1.82 million tons per year. After the completion of mining operations, the entire project site, including the proposed expansion area, would be fully reclaimed to a variety of wildlife habitat and agricultural uses in a manner similar to the draft mine reclamation plan and addendum. These end uses would include the creation of open water pond habitat, oak woodland, riparian and wetland habitats, an elderberry mitigation area, and walnut orchards. Because the rice field now occupying the Phase 6 area would not be converted for mining, this area would not be reclaimed for rice production.

ENVIRONMENTAL ANALYSIS

Land Use and Agriculture

Because this alternative would not include Phase 6, it would result in phased conversion of approximately 217 acres of state-designated Farmland and 63 acres of federally designated Farmland.

This represents a reduction of 37 and 33 acres of Farmland, respectively. This alternative would reclaim the mined areas and offsite areas to agricultural land that might not demonstrate the characteristics required for state or federal designation. This alternative, therefore, would result in reduced impacts related to farmland conversion.

This alternative would not include mining or reclamation in the Phase 6 area. Therefore, when compared with the proposed project, this alternative would result in fewer land use compatibility conflicts associated with air quality, health risks related to diesel exhaust, deposition of particulates (i.e., dust) on nearby crops, detectable odors from diesel-powered equipment, and would reduce all mine-generated noise impacts to a less-than-significant level.

Visual Resources

This alternative would result in similar visual impacts as the proposed project, but would eliminate the significant but mitigable long-term visual impacts related to mining and reclamation of Phase 6, including nighttime lighting of Phase 6.

Public Services

Because this alternative would reduce the project life span from the estimated length of the proposed project, it would result in slightly reduced less-than-significant impacts related to public services.

Traffic

Because the mining and processing rates would be similar to the proposed project, the daily and yearly off-site truck traffic generated by the proposed mine expansion project would be approximately the same as under the proposed project. The average number of annual truck trips would be reduced as a result of a reduction in average annual production rate from the existing level of 1.5 million tons to 1.25 million tons, as under the proposed project. Therefore, traffic impacts related to levels of service in Sheridan and Lincoln would be similar to those under the proposed project. Because the Reduced Acreage Alternative would include 2 fewer years of mining, it would reduce the duration of pavement damage to county roads from haul trucks by 2 years, thus reducing this significant but mitigable impact.

Air Quality

Because this alternative would not include mining and reclamation of Phase 6, it would generate fewer pollutants, less odor, and fewer potential health risks related to diesel exhaust. This alternative, however, would not reduce any significant unavoidable air quality impacts to a less-than-significant level.

Because this alternative would include construction of the same onsite and offsite improvements as the proposed project (i.e., construction of the asphalt batch plant, office building, and scales), this alternative would result in similar impacts related to short term increases in construction-generated pollutants (Impact 8-1). As discussed in Impact 8-2 (Chapter 8), the volume of fugitive source PM₁₀ emissions generated during each phase of mining are directly related to the onsite haul trucks and,

specifically, by the distance they need to travel to carry mined aggregate to the processing plant. In every phase except Phase 6, the onsite haul trucks would contribute a higher volume of PM₁₀ than any other source. Because Phase 6 would be closer to the processing plant than any of the other mining phases, it would generate the lowest volume of PM₁₀ of all the proposed mining phases. Also as discussed in Impact 8-2, emissions of other pollutants (i.e., tailpipe emissions) would vary by phase depending on the distance traveled by onsite haul trucks and service vehicles (e.g., fueling and maintenance vehicles). Tail pipe emissions from mobile sources (e.g., onsite haul trucks) are anticipated to gradually decrease in the future due to continued improvements in mobile source technology fuel efficiency, and the increased availability and use of reformulated fuels. Therefore, future mining phases such as Phase 6 are expected to generate fewer emissions than earlier phases. All proposed mining phases, however, would exceed applicable thresholds for ROG, NO_x, and PM₁₀. Elimination of Phase 6, therefore, would not reduce the significant unavoidable impacts related to long-term increases in regional criteria pollutants and precursors to a less-than-significant level. Eliminating mining and reclamation of Phase 6 would, however, reduce the duration of this impact.

Because this alternative would not include mining Phase 6, it would result in a decrease of localized concentrations of PM₁₀ at sensitive receptors near the project site. As shown in Table 8-12 (Chapter 8), mining activities in Phase 6 contribute substantially higher PM₁₀ concentrations at the receptor most affected by project-generated PM₁₀ (i.e., "Peak Impact Site"). Table 8-12 also shows, however, that haul trucks on public roads dominate project-generated PM₁₀ for all of the proposed mining phases. Additionally, reclamation of the Phase 6 area to agricultural use would result in generation of PM₁₀, albeit for approximately 2 fewer years than the proposed project. This alternative, therefore, would not reduce the significant unavoidable impacts related to localized concentrations of PM₁₀ to a less-than-significant level. This alternative, would, however, reduce the duration of this impact. This alternative would also reduce the area within which the project would cause particulate deposition on nearby agricultural crops. But because mining Phases 2, 4, and 5 would be located directly adjacent to agricultural fields, this alternative would not reduce this significant unavoidable impact to a less-than-significant level.

As discussed in Impact 8-7, the peak health risk impacts related to diesel exhaust PM from onsite sources (e.g., onsite haul trucks and processing equipment) are estimated to occur along the facility boundaries near the processing and mining areas. As shown in Table 8-13, unmitigated mining of Phase 6 would generate a substantial additional cancer risk due to the proximity to nearby residences. Mine-related emissions, however, would be reduced below the cancer risk threshold by installation of conveyor belts and use of emulsified diesel fuel, however the cancer risk generated by the on-highway haul trucks and, therefore, the cancer risk from all sources combined, would still result in a combined cancer risk exceeding the cancer risk threshold (see Mitigation Measure 8-7 and Table 8-17). This alternative, therefore, would not be required to reduce mine-related emissions below the cancer risk threshold, but would result in 2 fewer years of on-highway haul truck traffic. The Reduced Acreage Alternative, therefore, would not be expected to reduce this significant and unavoidable impact to a less-than-significant level.

As discussed in Impact 8-10, an increase in odors at nearby sensitive receptors could be caused by operation of diesel-powered equipment and haul trucks, but would primarily be associated with the

asphalt batch plant. This alternative would reduce the duration of asphalt batch plant operations by approximately 2 years and would eliminate the use of diesel-powered equipment in Phase 6. This alternative, therefore, would be expected to reduce the occurrence of increased odors at nearby receptors. Because this alternative would not eliminate odors produced by the asphalt batch plant and other diesel-powered vehicles and equipment at the mine, however, it is not expected to reduce this significant impact to a less-than-significant level.

Noise

Under this alternative the same types of noise-generating activities would occur, but mining would be confined to Phases 2–5, which are located farther from most nearby noise-sensitive receptors than Phase 6. Similar to the proposed project, this alternative would result in significant but mitigable impacts related to construction activities (i.e., asphalt batch plant, office building, and scales); aggregate and asphalt processing; and mining and reclamation of phases 2–5. This alternative would result in 2 fewer years of mining than the proposed project, resulting in 2 fewer years of highway haul truck trips than the proposed project. Because noise impacts generated by highway haul trucks is considered less-than-significant for the project, however, the Reduced Acreage Alternative would not be needed to reduce this impact to a less-than-significant level.

As discussed in Chapter 9 (Noise), the proposed project would result in significant and unavoidable noise impacts at nearby offsite residences. As shown in Table 17-16, however, elimination of Phase 6 would reduce all project-generated noise impacts on nearby residences to a less-than-significant level.

Geology, Minerals, Soils, and Paleontological Resources

The Reduced Acreage Alternative would result in similar impacts related to geology, minerals, soils, and paleontological resources to the proposed project. Because less mining would occur under the Reduced Acreage Alternative, however, this alternative would result in slightly reduced significant impacts related to erosion of reclaimed slopes.

<p align="center">Table 17-16 Predicted Operational Noise Levels (dBA L_{eq})¹ Reduced Acreage Alternative</p>								
Sensitive Receptor #	Baseline	Proposed Project With No Mitigation	Significant Increase Prior to Mitigation? ²	With Mitigation Measure R9-2(a) (Equipment Noise Control Devices)	With Mitigation Measure R9-2(b) and Elimination of Phase 6		Significant Increase After Mitigation? ²	Significance After Mitigation ³
					Daytime	Nighttime		
1	84.62	60.40	NO	51.62	51.00	49.16	NO	LTS
2	50.40	60.23	YES	49.59	49.59	44.41	NO	LTS
3	59.17	72.05	YES	61.76	57.64	57.35	NO	LTS
4	56.85	80.59	YES	68.63	54.17	53.47	NO	LTS
5	58.27	75.76	YES	64.15	55.10	54.67	NO	LTS
6	69.09	58.80	NO	50.23	49.83	47.95	NO	LTS
7	56.35	57.37	NO	48.38	47.77	45.73	NO	LTS
8	84.62	58.25	NO	49.27	49.27	46.64	NO	LTS
9	58.76	59.25	NO	49.02	49.02	44.73	NO	LTS
10	55.39	67.64	YES	57.03	52.59	51.91	NO	LTS
11	51.84	66.31	YES	55.24	50.02	48.73	NO	LTS
12	51.45	65.62	YES	54.71	50.52	48.72	NO	LTS
13	46.90	57.42	YES	47.03	47.03	42.39	NO	LTS
14	45.50	57.27	YES	46.49	46.49	40.92	NO	LTS
15	45.23	58.54	YES	47.36	47.36	40.37	NO	LTS
16	44.28	57.18	YES	46.15	46.15	40.00	NO	LTS
17	44.07	57.60	YES	46.44	46.44	40.00	NO	LTS
18	41.23	56.54	YES	45.25	45.25	40.00	NO	LTS
¹ Based on the same assumptions outlined in Table 9-6 and typical equipment noise levels at 50 feet with feasible noise control as presented in Table 9-5. ² Significance increase is defined as a noticeable increase (i.e., 3 dBA or greater) in ambient noise levels in comparison to baseline conditions. ³ Predicted increases in ambient noise levels would exceed Placer County's recommended noise criteria for land use compatibility (i.e., 60 dBA L _{eq} [7am-10pm], 50 dBA L _{eq} [10 pm-7am].)								

Water Resources

The Reduced Acreage Alternative would result in similar water resource impacts as the proposed project with respect to flooding of mining areas or reclamation features, increased runoff, loss of water from aquifer storage due to evaporation, sediment loading, and increased methyl mercury production. All of these impacts would either be less-than-significant or significant but mitigable. Because this alternative would not include mining and dewatering in Phase 6 (located south of the Bear River), it would not have the potential to lower groundwater levels south of the river and, thus, would not result in the potential to affect the pumping rates or efficiency of nearby wells (there are no water supply wells adjacent to the project site north of the river). EIR Mitigation Measure 11-3 would reduce this significant project impact to a less-than-significant level. The Reduced Acreage Alternative, therefore, would not be needed to reduce this impact to a less-than-significant level.

Biological Resources

The land area planned for Phase 6 of the proposed project supports a rice field, which does not provide habitat for sensitive biological resources. Eliminating mining in Phase 6, therefore, would result in substantially similar impacts on biological resources as the proposed project.

Public Health and Safety

Hazards associated with this alternative would involve the creation of reclamation features that could be an attractive nuisance to unauthorized persons and the creation of vector breeding habitat (particularly for mosquitoes) as a result of the creation of standing water within mine pit areas and reclaimed open water lake areas. Because fewer mine pits would be excavated, however, this alternative would result in slightly reduced less-than-significant impacts related to reclamation features and mosquito hazards.

Hazardous Materials

The Reduced Acreage Alternative would result in impacts related to hazardous materials similar to those identified for the proposed mine expansion project. Hazardous materials, including fuels, lubricants, and solvents needed for construction of the asphalt batch plant, the office building, and scales would also be used for this alternative. This alternative would also result in the potential release of agricultural chemicals in the soils of proposed mining phases 2-5. Therefore, implementation of this alternative would result in similar significant but mitigable impacts related to hazardous materials.

Cultural Resources

The Reduced Acreage Alternative would result in similar but reduced impacts on cultural resources compared to those of the proposed mine expansion project. Potential impacts involving disturbance of unknown subsurface cultural resources associated with mining in the proposed expansion area would occur, but the area to be disturbed would be smaller and thus the potential for disturbance of unknown resources would be reduced. Therefore, this alternative would result in reduced impacts on cultural resources compared to those of the proposed mine expansion project.

CONCLUSIONS

The Reduced Acreage Alternative would reduce the acreage of state-designated and federally designated Farmland converted to nondesignated Farmland by approximately 37 and 33 acres, respectively. Because this alternative would not include mining and reclamation of Phase 6, it would generate fewer pollutants and less odor. This alternative, however, would not reduce any significant unavoidable air quality impacts to a less-than-significant level. This alternative would result in a reduced level of health risk from onsite sources, and would reduce the duration of this significant impact by approximately 2 years. Because health risk values are calculated over a 70-year period of exposure, an exposure reduction of 2 years under this alternative could also reduce the level of health risk associated with on-highway haul trucks. This alternative would still be expected to extend the period of exposure near the mine and along the haul routes over the currently permitted operation by 18 to 28 years, however, and is not expected to reduce these significant unavoidable impacts to a less-than-significant level. Because Phase 6 would not be mined, the Reduced Acreage Alternative would reduce all significant noise impacts on nearby residences to a less-than-significant level. This alternative would reduce significant and less-than-significant impacts related to land use compatibility; visual resources; public services; geology, minerals, soils, and paleontological resources; biological resources; public health and safety; and, cultural resources. Additionally, this alternative would achieve all of the basic project objectives, including development of known aggregate resources in close proximity to existing processing facilities, development of a sufficient supply of asphalt to meet the future needs of society, and creation of new job opportunities.

ALTERNATIVE SITE LOCATIONS

In determining whether alternative locations for the mine expansion project need to be considered in an EIR, State CEQA Guidelines §15126.6(F)(2)(B) provides:

If the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR. For example, in some cases *there may be no feasible alternative locations for a geothermal plant or mining project which must be in close proximity to natural resources at a given location [emphasis added]*.

As stated in Section 2.4 of this EIR, the primary objective of the applicant is to secure permits and approvals to fully develop the known high-quality sand and gravel deposits located at the project site; to maximize the use of onsite facilities, equipment, and personnel; and to maximize the return on capital investments.

Feasible locations for aggregate mines are generally limited. The successful development of an aggregate mine depends on a variety of geologic and environmental factors, primarily the existence of marketable quantities of construction grade material. Factors affecting the economic feasibility of aggregate mine development on a particular site include the availability of land with a willing seller or lessor, the method of extraction, depth of overburden, percentage of sands to gravel, and the distance between the mine and the consumption area. Although it is conceivable that new locations for sand and gravel mines may

be available to a mine operator, no other location would meet the project's primary objective of expanding their existing operation to develop known resources at the project site, and thereby utilizing an existing processing plant. Given an alternative site's inability to meet project objectives, the use of an alternative site for implementation of the proposed project would not be feasible. Accordingly, no further analysis of alternative sites is provided in this EIR.

17.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

MINING AND PROCESSING ALTERNATIVES

State CEQA Guidelines §15126.6(c)(2) states “[i]f the environmentally superior alternative is the ‘no project’ alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.” Table 17-17 provides a comparison of alternatives. The No Project Alternative is the environmentally superior alternative. This alternative would not result in a lower AAPR (1.5 mty reduced to 1.25 mty) as would the proposed project, so it might not result in decreased annual truck traffic, decreased traffic noise, and decreased on-highway diesel emissions. The No Project Alternative, however, would eliminate ROG, PM₁₀, SO_x, and CO emissions and odors generated by the proposed asphalt batch plant. The No Project Alternative would also eliminate significant unavoidable air quality, health risk, and noise impacts generated by the proposed mine expansion. This alternative would also convert substantially less farmland and oak woodland, and would remove fewer elderberry shrubs. This alternative would also avoid or reduce certain significant and less-than-significant impacts related to land use compatibility; visual resources; noise; geology, minerals, soils, and paleontological resources; water resources; biological resources; public health and safety; hazardous materials; and cultural resources. The No Project Alternative, however, would not achieve three basic project objectives—developing known aggregate resources in close proximity to existing processing facilities, producing asphalt, and creating new job opportunities.

Overall, the No Asphalt Batch Plant Alternative would result in substantially similar, but reduced, impacts compared to those associated with the proposed project. This alternative would not fill the settling ponds for construction of the asphalt batch plant, a possible mosquito-breeding area. This alternative would also reduce certain impacts related to land use compatibility; visual resources; public services; noise; air quality; geology, minerals, and soils; public health and safety; and hazardous materials, but would not reduce any significant and unavoidable impacts to a less-than-significant level. Additionally, this alternative would not meet the basic project objectives of allowing for the development of a sufficient supply of asphalt to meet the future needs of society and creating new job opportunities associated with the operation of the asphalt batch plant.

The Reduced Acreage Alternative would reduce the acreage of state-designated and federally designated Farmland converted to nondesignated Farmland. Because this alternative would not include mining and reclamation of Phase 6, it would generate fewer pollutants and less odor. This alternative, however, would not reduce any significant unavoidable air quality impacts to a less-than-significant level. This alternative would result in a reduced level of health risk from onsite sources and on-highway haul trucks, and would reduce the duration of these significant impacts by approximately 2 years. This alternative would still be expected to extend the period of exposure near the mine and along the haul routes over

the currently permitted operation by 18 to 28 years, however, and is not expected to reduce these significant unavoidable impacts to a less-than-significant level. Because Phase 6 would not be mined, the Reduced Acreage Alternative would reduce all significant noise impacts on nearby residences to a less-than-significant level. Additionally, this alternative would achieve all of the basic project objectives, including development of known aggregate resources in close proximity to existing processing facilities, development of a sufficient supply of asphalt to meet the future needs of society, and creation of new job opportunities.

Because the Reduced Acreage Alternative would reduce all significant noise impacts on nearby residences to a less-than-significant level, thus reducing significant unavoidable project-generated noise impacts, this alternative is considered the environmentally superior mining and processing alternative.

HAUL ROUTE ALTERNATIVE

The Haul Route Alternative would meet all basic project objectives, and would result in the same impacts at the project site (i.e., the existing mine site and proposed expansion area) as would the proposed project.

Constructing a new haul road would generate new short-term construction-related impacts (e.g., pollutant emissions, noise, construction lighting). All construction impacts would be mitigable to a less-than-significant level except the short-term air quality impacts, which would be similar to the short-term air quality impacts generated by construction of the proposed asphalt batch plant at the mine site.

Operation of a new haul road would divert trucks and other nonproject traffic around downtown Sheridan, reducing traffic volumes at downtown Sheridan intersections including Riosa Road/SR 65 and Riosa Road/11th Street. Diverting haul trucks and other traffic along a new haul road would reduce traffic noise levels along Riosa Road (i.e., the existing haul road), but would increase noise levels along the Haul Route Alternative alignments, resulting in a significant and unavoidable noise impact that would not occur if a new haul road were not constructed. Because fewer residences would be located near the Haul Route Alternative alignments than are located along Riosa Road in downtown Sheridan, this alternative would reduce overall diesel exhaust health risk impacts in the community of Sheridan related to haul truck traffic. Unlike the proposed project, this alternative would not result in a significant impact related to diesel exhaust health risk, and would, therefore, reduce this significant and unavoidable project impact to a less-than-significant level.

Implementing the Haul Route Alternative would, therefore, result in one new significant and unavoidable impact related to traffic noise, but would result in one less significant and unavoidable impact related to diesel exhaust health risk. Because the Haul Route Alternative would reduce overall diesel exhaust health risk impacts in the community of Sheridan, this alternative is considered environmentally superior to continued use of the existing haul route along Riosa Road. Because fewer residences are located along alignment 2 than alignment 1, fewer residences would be exposed to traffic noise and diesel exhaust than alignment 1. Alternative 2, therefore, would be environmentally superior to alignment 1 and to the existing haul route.

As previously discussed, however, the feasibility of this alternative would depend upon the County's ability to acquire the private lands within the chosen alignment and its plans to construct an additional storage pond and irrigation spray field within a portion of alignment 2. If Haul Route Alternative alignment 2 is determined to be feasible, it would be the environmentally superior haul route alternative that meets all project objectives. If alignment 2 is not feasible, but alignment 1 is feasible, it would be the environmentally superior haul route alternative that meets all project objectives. If neither Haul Route Alternative alignment is feasible, continued use of the existing haul route would be the environmentally superior haul route alternative that feasibly meets all project objectives.

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Table 17-17 Comparison of Alternatives					
Proposed Mining Project/ Existing Haul Route	No Project/ Existing Haul Route	No Asphalt Batch Plant/ Existing Haul Route	Reduced Acreage Alternative/ Existing Haul Route	Proposed Mining Project / Haul Route Alternative Alignment 1	Proposed Mining Project/ Haul Route Alternative Alignment 2
Description					
<ul style="list-style-type: none">▶ Mining Phases 2–6▶ Implementation of proposed reclamation plan▶ New asphalt batch plant▶ 1.25 mty AAPR▶ 1.82 mty MAPR▶ Existing haul route	<ul style="list-style-type: none">▶ Completion of Phase 1▶ No new mining phases▶ Implementation of current reclamation plan▶ No new asphalt batch plant▶ 1.5 mty AAPR▶ 1.82 mty AAPR▶ Existing haul route	<ul style="list-style-type: none">▶ Mining Phases 2–6▶ Implementation of proposed reclamation plan▶ No new asphalt batch plant▶ 1.25 mty AAPR▶ 1.82 mty MAPR▶ Existing haul route	<ul style="list-style-type: none">▶ Mining Phases 2–5▶ Implementation of proposed reclamation plan (except Phase 6)▶ New asphalt batch plant▶ 1.25 mty AAPR▶ 1.82 mty MAPR▶ Existing haul route	<ul style="list-style-type: none">▶ Mining Phases 2–6▶ Implementation of proposed reclamation plan▶ New asphalt batch plant▶ 1.25 mty AAPR▶ 1.82 mty MAPR▶ Construction and use of Haul Route Alternative alignment 1	<ul style="list-style-type: none">▶ Mining Phases 2–6▶ Implementation of proposed reclamation plan▶ New asphalt batch plant▶ 1.25 mty AAPR▶ 1.82 mty MAPR▶ Construction and use of Haul Route Alternative alignment 2
Results of Analysis					
<p><u>Advantages</u></p> <ul style="list-style-type: none">▶ Meets all project objectives▶ Reduced AAPR <p><u>Disadvantages</u></p> <ul style="list-style-type: none">▶ Significant unavoidable farmland, air quality, noise, and health risk impacts▶ Significant but mitigable biological impacts▶ Other significant but mitigable and less-than-significant impacts	<p><u>Advantages</u></p> <ul style="list-style-type: none">▶ Eliminates ROG, PM₁₀, SO_x, and CO emissions from asphalt batch plant▶ Eliminates significant unavoidable air quality, noise and health risk impacts▶ Less odor potential▶ Less farmland conversion▶ Less oak woodland conversion▶ Less elderberry shrub removal <p><u>Disadvantages</u></p> <ul style="list-style-type: none">▶ Does not meet project objectives▶ Does not reduce AAPR▶ Does not reduce truck volumes or traffic noise▶ Higher onsite mobile-source emissions	<p><u>Advantages</u></p> <ul style="list-style-type: none">▶ Meets all project’s aggregate mining and processing objectives▶ Reduced AAPR▶ Eliminates ROG, PM₁₀, SO_x, and CO emissions from asphalt batch plant▶ Less odor potential▶ Slightly fewer truck trips <p><u>Disadvantages</u></p> <ul style="list-style-type: none">▶ Similar mining impacts to proposed project▶ Does not meet project objective related to asphalt production	<p><u>Advantages</u></p> <ul style="list-style-type: none">▶ Meets all project objectives▶ Reduced AAPR <p><u>Disadvantages</u></p> <ul style="list-style-type: none">▶ Significant unavoidable farmland and air quality impacts▶ Significant but mitigable noise impacts▶ Significant but mitigable biological impacts▶ Other significant but mitigable and less-than-significant impacts	<p><u>Advantages</u></p> <ul style="list-style-type: none">▶ Meets all project objectives▶ Reduced AAPR▶ Diverts trucks around downtown Sheridan▶ Fewer sensitive receptors▶ Mitigates significant health risk impact <p><u>Disadvantages</u></p> <ul style="list-style-type: none">▶ Similar mine-site impacts to proposed project▶ Significant unavoidable road noise impact▶ Significant unavoidable temporary air quality impact▶ Other significant but mitigable and less-than-significant impacts▶ Feasibility to be determined	<p><u>Advantages</u></p> <ul style="list-style-type: none">▶ Meets all project objectives▶ Reduced AAPR▶ Diverts trucks around downtown Sheridan▶ Fewest sensitive receptors▶ Mitigates significant health risk impact <p><u>Disadvantages</u></p> <ul style="list-style-type: none">▶ Similar mine-site impacts to proposed project▶ Significant unavoidable road noise impact▶ Significant unavoidable temporary air quality impact▶ Other significant but mitigable and less-than-significant impacts▶ Feasibility to be determined
Conclusions					
<ul style="list-style-type: none">▶ Not environmentally superior▶ Meets all project objectives	<ul style="list-style-type: none">▶ Environmentally superior to proposed project▶ Does not meet project objectives	<ul style="list-style-type: none">▶ Environmentally superior to proposed project▶ Does not meet all project objectives	<ul style="list-style-type: none">▶ Environmentally superior to proposed project▶ Meets all project objectives	<ul style="list-style-type: none">▶ Environmentally superior to proposed project▶ Meets all project objectives▶ Feasibility to be determined	<ul style="list-style-type: none">▶ Environmentally superior haul route alternative▶ Meets all project objectives▶ Feasibility to be determined